

DEPARTMENT OF THE INTERIOR,
CENSUS OFFICE.

ROBERT P. PORTER, Superintendent.

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REPORT

ON

POPULATION AND RESOURCES OF ALASKA

AT THE

ELEVENTH CENSUS: 1890.



WASHINGTON, D. C.:
GOVERNMENT PRINTING OFFICE,
1893.

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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
CENSUS OFFICE,
WASHINGTON, D. C., February 9, 1893.

SIR:

I have the honor herewith to transmit the report on the population and resources of Alaska. This remote portion of our territory presents difficulties in the way of enumeration scarcely conceivable in the older portion of the country. On an estimated area greater than that of all the states north of Tennessee and east of the Mississippi there is a population less than in most single counties of the populous east. Let one imagine that all railroads and wagon roads, all vehicles and horses, were here wanting; let him imagine that enumerators could only reach this eastern section by a coasting vessel or pierce its interior by the Ohio river; let him imagine this section pushed north till its upper portion was in almost perpetual frost and its one navigable river was open but a few weeks in a year, and he can begin to measure the obstacles met in mountainous Alaska.

A part of the people are migratory, and the same band is liable to be reported from two places, or a spot correctly reported as populated is liable to be found desolate when visited later.

The Census Office has endeavored to reduce the elements of error to the lowest possible limit. The number of white persons who have gone 5 miles from the vessel on which they were viewing the magnificent coast scenery, or prospecting on the Yukon river in the brief interval when its icy bond is loosed, is exceedingly small. A goodly number of men know intimately some portion of Alaska. It is safe to say that no one man can speak from personal knowledge of all portions.

The local enumeration as far as possible was put in the hands of men personally familiar with their fields of labor. After great difficulties, often in peril, in canoe and other travel along uncharted routes, they have made the returns which are aggregated in this report.

The resources of Alaska, its fisheries and mines, are important to the nation. Before another census it is hoped that the facilities for their accurate determination will be greatly improved, and that at least the more stable population of the southeastern portion will be in easy communication with the rest of the country.

I have the honor to be, sir, respectfully yours,

ROBERT P. PORTER,
Superintendent of Census.

Hon. JOHN W. NOBLE,
Secretary of the Interior.

INTRODUCTION.

To take the census of Alaska even at this date, after 23 years of possession by the United States, involves a special condition in statistics. We are all familiar with the favorite illustration by means of parallel columns differing in color and length and denoting increase or decrease of population in successive periods of enumeration. In dealing with Alaskan statistics of population we have no previous diagram to which we may refer, not even a solitary column of definite figures upon which to build or base our present structure.

The people who discovered the region now known as Alaska, and who held it for nearly one and a half centuries, never knew nor even tried to ascertain the number of all the people therein contained. Vitus Bering, who commanded the Russian naval expedition which discovered the northwestern extremity of the American continent, never saw any of its people, and sacrificed his life upon an uninhabited island which still bears his name. Captain Alexis Chirikof, who commanded the second vessel of Bering's expedition, saw a few canoes filled with Thlingit warriors, probably on the coast of Baranof island, who approached his ship after having decoyed and massacred 2 boats' crews of his command. On his return voyage Chirikof and his officers saw a few natives belonging to one of the islands of the Shumagin group, and a few more belonging to islands of the Aleutian chain; but they made no estimate as to the probable population of the country they had discovered for their imperial mistress.

After the discovery of Alaska had been accomplished and duly heralded to the world the Russian imperial government rested upon its glory for many years, leaving it to the enterprise and courage of its hardy Siberian and Kamchatkan pioneers to develop the new discovery. As the horde of fur hunters advanced from island to island along the Aleutian chain in their frail boats of fir planks lashed together with rawhide thongs they observed and reported a multitude of good-natured savages at nearly every point visited in the course of their dangerous voyages, but did not venture upon estimates.

The first government officials to visit this newly discovered domain of Russia were Captains Krenitzin and Levashef, of the Russian navy, who explored a few of the Aleutian islands and the western extremity of the Alaskan peninsula. These men included in their report some rather vague statistics as to population, but asserted quite positively that even at that early date the population had decreased at least one-half since the advent of the Russian fur hunters. This expedition performed its work during the years 1768 and 1769. Previous to this, in 1762, one of the "irrepressible" Kamchatkan traders had already reached the island of Kadiak, which he reported as thickly inhabited. 22 years later, in 1784, Grigor Shelikof, the founder of the first permanent Russian settlement in Alaska, established himself on Kadiak island, and reported to the empress that "by his discovery he had increased her subjects by the number of 50,000 natives, eager to adopt the christian faith and to surrender themselves to the maternal care of his august mistress".

The earliest actual count of any Alaskan natives now on record was made by Eustratus Delarof, a Greek, employed as general agent by the fur company formed by Shelikof. This enumeration, which comprised all the villages on Kadiak island and one or two settlements on the mainland opposite, was taken in the year 1792, and resulted in a total of 6,510 of both sexes. Another count taken 4 years later, in 1796, by order of Alexander Baranof, the "father of the Russian colonies in North America", and covering nearly the same ground, footed up 6,200.

Captain Sarychef, one of the officers of the exploring expedition commanded by Admiral Joseph Billings, of the Russian navy, was instructed to enumerate the natives of the Aleutian islands in 1792. He reported 2,500 of both sexes, but an actual count made but a few years later at the instance of the imperial chamberlain, Nicholas Rezanof, resulted in reducing this figure to 1,492. At the time of Baranof's retirement from the management of the Russian colonies in North America, his immediate successor, Captain Hagemeister, of the Russian navy, ordered an enumeration of the natives, including, of course, only those tribes over which the Russian American Company had absolute control. Of this partial census we have two returns differing slightly in their totals. The first, dated 1818, shows an aggregate of 8,893 (4,452 males, 4,441 females), the second return, dated 1819, shows an aggregate of 14,019, including, however, an estimate of 5,000 Thlingits, omitted from the previous document. The next enumeration of Alaskan natives was dated 1822 and footed up 8,286, again omitting the Thlingits, who at that time successfully defied Russian authority.

Baron Wrangell, chief manager of the Russian colonies, forwarded to the imperial government under date of January 1, 1825, a statement of the native population under his control, aggregating 8,481 of both sexes. In the year 1830 Veniaminof, the "apostle of Alaska", published a statement of the fluctuations of the population in the districts of Kadiak and the Aleutian islands between the years 1781 and 1830. According to this document the population of the Kadiak district had decreased within the period mentioned from 6,510 to 3,396, while in the Aleutian district the number of people had declined less rapidly, being given as 1,900 in 1781 and 1,460 in 1830. In 1831 a complete census of the inhabitants of the Aleutian islands was taken by the same priest, Veniaminof, giving a total of 1,515. 4 years later Veniaminof, who was then stationed at Sitka, made an estimate of the number of Thlingits, aggregating 5,850, which comes remarkably close to the total of our census to-day. In 1839 Veniaminof furnished for the first time a well considered estimate, including the total population of the country now called Alaska. This estimate was published in full in the Alaska volume of the Tenth Census, and furnishes a remarkable instance of close estimate, as well as reasoning, in every detail. His figures showing the strength of the various tribes and races are almost what we now know them to be, while his total of 39,813 was probably but little below the actual truth at the time of his writing. Though objections may be made to certain details of this estimate, the statement as a whole must convince us that Veniaminof then had a better conception of the population of Russian America in his day than was exhibited by the compilers of the numerous official reports furnished the imperial government by the Russian American Company during many succeeding years.

From this time forward no detailed population statistics of the Russian colonies were published, beyond the fictitious total of 56,000 reported in the brief biennial reports of the chief managers of the Russian American Company, until the year 1860. In that year the Holy Synod, the highest ecclesiastical tribunal of the Russian empire, published in the annual report a census of christians in Russian America as furnished by priests and missionaries stationed in the colonies. This report showed a total of 9,845 (5,127 males and 4,718 females), exclusive of Russian employes of the company.

RUSSIAN CENSUS OF 1860 (CIVILIZED PEOPLE OF RUSSIAN COLONIES).

[Taken from Report of Committee on Organization of Russian American Colonies, volume II.]

| DISTRICTS. | AGGREGATE. | | | RUSSIANS. | | | CREOLES. | | | ALEUTS. | | | KENAITS. | | | KUSKOKWIM AND AGLEMIUT. | | | CHUGATZ AND COPPER RIVER. | | |
|-----------------|------------|-------|---------|-----------|-------|---------|----------|-------|---------|---------|-------|---------|----------|-------|---------|-------------------------|-------|---------|---------------------------|-------|---------|
| | Total. | Male. | Female. | Total. | Male. | Female. | Total. | Male. | Female. | Total. | Male. | Female. | Total. | Male. | Female. | Total. | Male. | Female. | Total. | Male. | Female. |
| Total.... | 9,845 | 5,127 | 4,718 | 557 | 493 | 64 | 1,886 | 921 | 965 | 4,486 | 2,268 | 2,218 | 931 | 440 | 491 | 1,398 | 699 | 699 | 587 | 306 | 281 |
| Sitka..... | 1,021 | 609 | 352 | 452 | 339 | 63 | 505 | 249 | 256 | 64 | 31 | 33 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Kadiak..... | 5,944 | 2,984 | 2,950 | 67 | 66 | 1 | 871 | 431 | 440 | 2,148 | 1,081 | 1,067 | 931 | 440 | 491 | 1,340 | 670 | 670 | 587 | 306 | 281 |
| Unalaska..... | 1,770 | 881 | 889 | 4 | 4 | ..... | 255 | 125 | 130 | 1,511 | 752 | 759 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Atka..... | 964 | 495 | 469 | 4 | 4 | ..... | 197 | 87 | 110 | 763 | 404 | 359 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| St. Michael.... | 146 | 88 | 58 | 30 | 30 | ..... | 58 | 29 | 29 | ..... | ..... | ..... | ..... | ..... | ..... | 58 | 29 | 29 | ..... | ..... | ..... |

During the last few years of the occupation of Alaska by the Russian American Company much confusion seems to have entered into the returns made by various colonial and imperial inspecting officers. We have two returns dated January 1, 1862, showing the same total of 10,156, but differing very much in the details of distribution. One of these returns enumerates the people by race and tribe, the other by districts; both were printed in Tikhmenief's *Historical Review*. In the second volume of this work, published in 1863, a table appears under the heading of "Population statistics of inhabitants of Russian America dependent upon and actually counted by the Russian American Company". This statement covers the years from 1830 to 1863, inclusive, and varies but little in its totals. For the year 1830 we find 10,327. About the middle of the period mentioned, in the year 1845, we find the population at its lowest, 7,224, while the highest point was reached in 1837 with 11,022. For 1863 the total is given as 10,125.

We have still another count of the inhabitants of Alaska, taken under the auspices of the Russian government, in the report of a special inspector, Kostlivtsov. In this statement the total of inhabitants known and counted is given as 7,934 on January 1, 1863, 2,191 less than the company's report for the same year. To this total Kostlivtsov adds an exaggerated estimate of the Atka or Copper River Indians to the number of 2,500 and of Thlingits aggregating 20,000, making a total of 30,434, thus reaching by the wildest estimate an approximately truthful result as to the total. This completes the population statistics transmitted to us from Russian sources.

The first official table of population issued subsequent to the acquisition of Alaska by the United States formed part of the report of Major General H. W. Halleck, of the United States army. By means of unconscious duplication of tribes under similar names and the insertion of a few imaginary ones, added to the wildest exaggeration in estimating the number of Athapascans, this officer succeeded in footing up a total of 82,400 people in Alaska. In the same year, 1868, Rev. Vincent Collyer, in his report to the Commissioner of Indian Affairs, reproduced General Halleck's table, and added a special estimate of the Thlingit tribes, furnished him by a trader named Mahoney. This estimate shows a total of 11,900 Thlingits.

ELEVENTH CENSUS OF THE UNITED STATES.

ROBERT P. PORTER, SUPERINTENDENT.

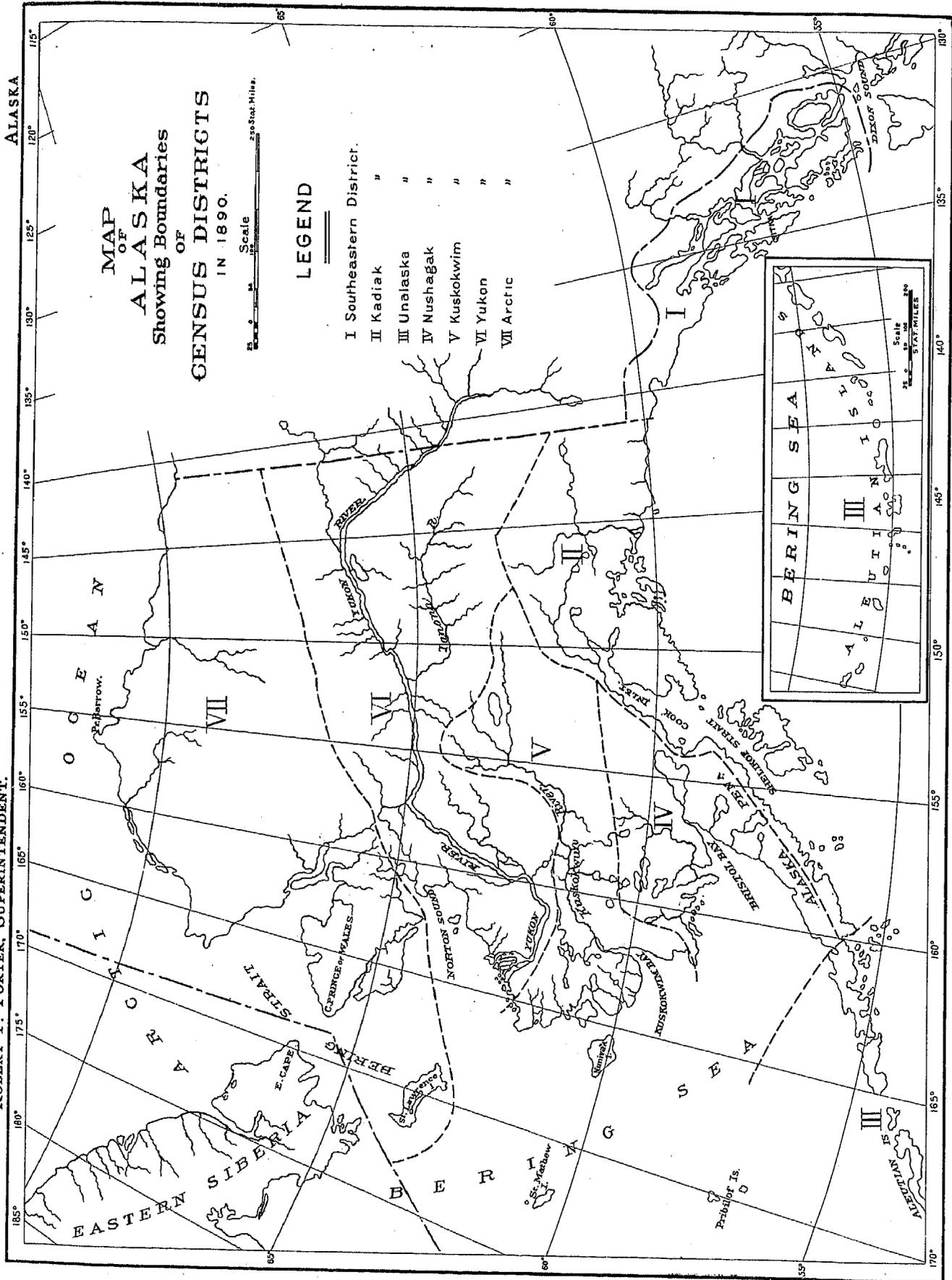
ALASKA

MAP OF ALASKA
Showing Boundaries
OF
GENSUS DISTRICTS
IN 1890.

Scale
1" = 100 STAT. MILES.

LEGEND

- I Southeastern District.
- II Kadiak "
- III Unalaska "
- IV Nushagak "
- V Kuskokwim "
- VI Yukon "
- VII Arctic "



Such was the material from which a basis had to be constructed for the work of the Tenth Census in Alaska, which was substantially intrusted to the efforts of one man, who, with the greatest difficulty, succeeded in obtaining at least a partial enumeration, supplemented by close and careful estimates for the remainder. Naturally, however, the labor performed in behalf of the Alaskan census in 1880 partook more of the nature of a reconnoissance, preparing the way for subsequent efforts under more favorable circumstances.

This brief report of what little has been done in the past brings us down to the present, the first detailed enumeration of Alaska, during the years 1890 and 1891.

For this enumeration it was found necessary to divide the territory into districts, and this was done as nearly as possible on the lines adopted in 1880, while at the same time the convenience of the comparatively few persons available for this work was taken into consideration. The result is illustrated in the accompanying map, showing the boundaries of the 7 census districts.

The first or Southeastern district comprises the coast and islands from the British Columbian boundary, latitude 54° 40', northward and westward to Mount St. Elias.

The second or Kadiak district embraces the territory lying between the North Pacific and the coast range of mountains from Mount St. Elias to Chignik bay, in the Alaskan peninsula, and the adjoining islands, including the Kadiak group.

The third or Unalaska district includes the almost continuous chain of islands from the Shumagin group to Attu, our ultimate west, and the south coast of the Alaskan peninsula from Chignik bay to Issanak strait, including also the Pribilof or Seal islands.

The fourth or Nushagak district covers the region drained by the rivers emptying into Bering sea and Bristol bay between Port Haiden and Cape Newenham, with adjoining islands.

The fifth or Kuskokwim district consists of the whole region drained by the river Kuskokwim and the flat lake country lying between its mouth and Capes Rumiantzof and Vancouver, with the adjoining island of Nunivak.

The sixth or Yukon district comprises the territory drained by the Yukon and its tributaries from the British American boundary westward.

The seventh or Arctic district has for its southern boundary the watershed between the Yukon basin and the Arctic, and embraces the north shore of Norton sound, Bering strait, Kotzebue sound, and our whole Arctic coast, with the islands of King (or Ukevok) and St. Lawrence.

In the enumeration of Alaska the same distinction as to race, color, and nativity was observed as has been adopted for the general census of the United States, but in the general tabular exhibits embodied in this report the statistics have been grouped as to race or color under 5 heads, as follows: (1) white, (2) mixed Indian, (3) Indian, (4) Mongolian, and (5) all others. The last named class comprises negroes, mulattoes, Hawaiians, Malays, and Portuguese mulattoes from the Cape Verde islands. Further distinction of these people was considered inadvisable, partly on account of their small number, but chiefly because they all belong to the class of temporary and transient residents of Alaska, being nearly all engaged in the whaling industry.

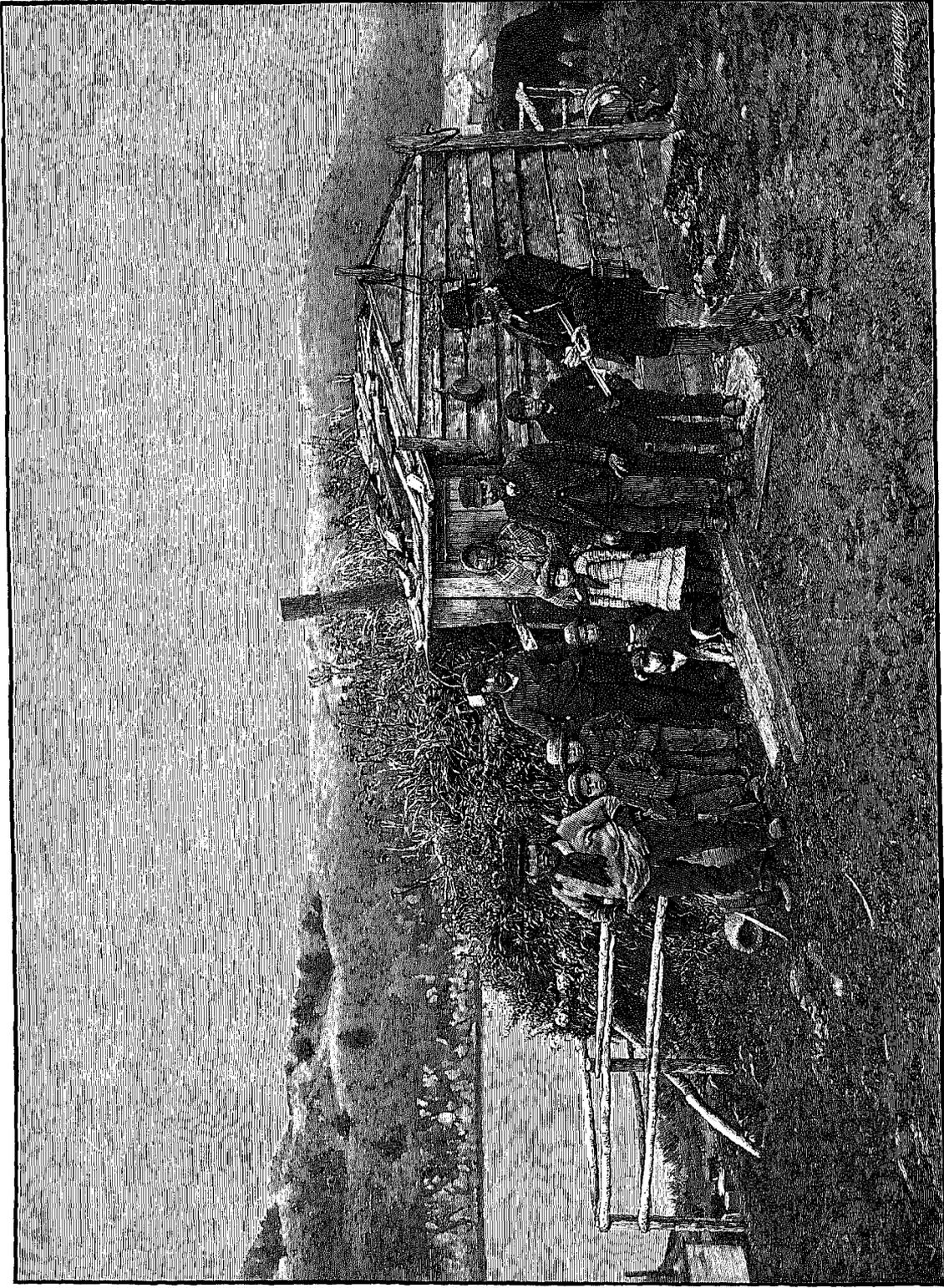
The Mongolians are chiefly Chinese, also temporary residents, with a few Japanese among them.

A few words must be said concerning the term "mixed Indian", which is applied to the descendants of intermarriage of Russians with native women in former times. They were a privileged class under the Russian régime, vested with certain rights denied even to natives of Russia. In numbers this mixed race is rapidly decreasing, and they were enumerated separately by the Tenth and Eleventh Censuses chiefly because they are the only people now remaining of the original inhabitants of the country to whom the clause of the treaty with Russia conferring the rights of citizenship could at that time apply, a point which may be of some importance when Congress sees fit to settle the political status of the people of Alaska.

In the classification of the inhabitants of Alaska as to nativity all natives of the country born previous to our acquisition of the Russian possessions have been counted as foreign born natives of Russian America, a distinction made necessary in view of possible future misunderstanding as to the right of such individuals to all the privileges of United States citizenship.

Eleventh Census of the United States.
Robert F. Porter, Superintendent.

Alaska.



TAKING THE CENSUS.

PART I.

POPULATION, GEOGRAPHY AND TOPOGRAPHY, AND SOCIAL
STATISTICS.

CHAPTER I.

STATISTICS OF POPULATION.

SUMMARY BY DISTRICTS.

| DISTRICTS. | Number of settlements. | RACE AND COLOR. | | | | | | | | | | | | | | | | | | | |
|--------------------|------------------------|-----------------|--------|---------|---------|----------|--------|-------|---------|--------|-------|---------|---------|--------|---------|------------|-------|---------|-------------|-------|---------|
| | | Total. | Male. | Female. | Native. | Foreign. | White. | | | Mixed. | | | Indian. | | | Mongolian. | | | All others. | | |
| | | | | | | | Total. | Male. | Female. | Total. | Male. | Female. | Total. | Male. | Female. | Total. | Male. | Female. | Total. | Male. | Female. |
| The territory. | 309 | 32,052 | 19,248 | 12,804 | 15,381 | 16,671 | 4,208 | 3,853 | 445 | 1,823 | 891 | 932 | 23,531 | 12,105 | 11,426 | 2,288 | 2,288 | ..... | 112 | 111 | 1 |
| Southeastern | 43 | 8,038 | 4,842 | 3,196 | 3,045 | 4,303 | 1,738 | 1,389 | 349 | 133 | 67 | 66 | 5,894 | 3,054 | 2,780 | 320 | 320 | ..... | 4 | 3 | 1 |
| Kadiak | 40 | 6,112 | 4,598 | 1,714 | 2,294 | 3,818 | 1,105 | 1,056 | 40 | 784 | 407 | 377 | 2,782 | 1,494 | 1,288 | 1,433 | 1,433 | ..... | 8 | 8 | ..... |
| Unalaska | 22 | 2,361 | 1,434 | 927 | 1,154 | 1,207 | 520 | 405 | 25 | 794 | 343 | 391 | 967 | 456 | 511 | 137 | 137 | ..... | 3 | 3 | ..... |
| Nushagak | 41 | 2,726 | 1,712 | 1,014 | 1,205 | 1,521 | 318 | 310 | 8 | 28 | 10 | 18 | 1,006 | 1,008 | 988 | 384 | 384 | ..... | ..... | ..... | ..... |
| Kuskokwim | 80 | 5,081 | 2,854 | 2,227 | 3,341 | 2,349 | 24 | 19 | 5 | 17 | 5 | 12 | 5,040 | 2,830 | 2,810 | ..... | ..... | ..... | ..... | ..... | ..... |
| Yukon | 53 | 3,912 | 2,099 | 1,813 | 2,082 | 1,839 | 202 | 193 | 9 | 127 | 59 | 68 | 3,683 | 1,847 | 1,738 | ..... | ..... | ..... | ..... | ..... | ..... |
| Arctic | 25 | 3,222 | 1,909 | 1,313 | 1,060 | 1,562 | 391 | 391 | ..... | ..... | ..... | ..... | 2,729 | 1,416 | 1,313 | 5 | 5 | ..... | 07 | 07 | ..... |

FIRST OR SOUTHEASTERN DISTRICT.

| VILLAGES. | RACE AND COLOR. | | | | | | | | | | | | | | | | | | | |
|------------------------|-----------------|-------|---------|---------|----------|--------|-------|---------|--------|-------|---------|---------|-------|---------|------------|-------|---------|-------------|-------|---------|
| | Total. | Male. | Female. | Native. | Foreign. | White. | | | Mixed. | | | Indian. | | | Mongolian. | | | All others. | | |
| | | | | | | Total. | Male. | Female. | Total. | Male. | Female. | Total. | Male. | Female. | Total. | Male. | Female. | Total. | Male. | Female. |
| The district..... | 8,038 | 4,842 | 3,196 | 3,645 | 4,303 | 1,738 | 1,389 | 349 | 133 | 67 | 66 | 5,894 | 3,054 | 2,780 | 320 | 320 | ..... | 4 | 3 | 1 |
| Auk settlements | 324 | 164 | 160 | 141 | 183 | 1 | 1 | ..... | ..... | ..... | ..... | 323 | 163 | 160 | ..... | ..... | ..... | ..... | ..... | ..... |
| Bartlett bay | 40 | 40 | ..... | 8 | 32 | 13 | 13 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 27 | 27 | ..... | ..... | ..... | ..... |
| Berners bay | 6 | 5 | 1 | 5 | 1 | 5 | 5 | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Burroughs bay | 134 | 93 | 41 | 20 | 114 | 18 | 17 | 1 | ..... | ..... | ..... | 91 | 51 | 40 | 25 | 25 | ..... | ..... | ..... | ..... |
| Chican | 38 | 23 | 15 | 23 | 15 | 9 | 8 | 1 | ..... | ..... | ..... | 29 | 15 | 14 | ..... | ..... | ..... | ..... | ..... | ..... |
| Chilkat | 153 | 147 | 6 | 22 | 131 | 73 | 69 | 4 | 3 | 1 | 2 | ..... | ..... | ..... | 77 | 77 | ..... | ..... | ..... | ..... |
| Chilkoot mission | 106 | 54 | 52 | 61 | 45 | ..... | ..... | ..... | ..... | ..... | ..... | 106 | 54 | 52 | ..... | ..... | ..... | ..... | ..... | ..... |
| Douglas city | 402 | 317 | 85 | 197 | 205 | 556 | 296 | 60 | 17 | 7 | 10 | 26 | 11 | 15 | 2 | 2 | ..... | 1 | 1 | ..... |
| Fish bay | 4 | 3 | 1 | 1 | 3 | 4 | 3 | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Fort Tongass | 50 | 26 | 24 | 27 | 23 | 6 | 6 | ..... | 1 | 1 | ..... | 43 | 19 | 24 | ..... | ..... | ..... | ..... | ..... | ..... |
| Funtor bay | 25 | 14 | 11 | 15 | 10 | 5 | 5 | ..... | ..... | ..... | ..... | 20 | 9 | 11 | ..... | ..... | ..... | ..... | ..... | ..... |
| Gambier bay | 8 | 4 | 4 | 4 | 4 | ..... | ..... | ..... | ..... | ..... | ..... | 8 | 4 | 4 | ..... | ..... | ..... | ..... | ..... | ..... |
| Hindsnotukee | 143 | 79 | 64 | 70 | 73 | ..... | ..... | ..... | ..... | ..... | ..... | 143 | 79 | 64 | ..... | ..... | ..... | ..... | ..... | ..... |
| Hoochinoo | 931 | 200 | 181 | 192 | 189 | ..... | ..... | ..... | ..... | ..... | ..... | 381 | 200 | 181 | ..... | ..... | ..... | ..... | ..... | ..... |
| Howkan | 105 | 52 | 53 | 63 | 42 | 11 | 5 | 6 | 4 | 2 | 2 | 90 | 45 | 45 | ..... | ..... | ..... | ..... | ..... | ..... |
| Huna | 438 | 234 | 204 | 237 | 201 | 2 | 2 | ..... | 43 | 15 | 28 | 434 | 232 | 202 | ..... | ..... | ..... | 1 | 1 | ..... |
| Juneau | 1,253 | 855 | 398 | 675 | 575 | 671 | 562 | 109 | 2 | ..... | ..... | 527 | 266 | 261 | 11 | 11 | ..... | ..... | ..... | ..... |
| Kakawaterka | 70 | 33 | 37 | 40 | 30 | ..... | ..... | ..... | ..... | ..... | ..... | 70 | 33 | 37 | ..... | ..... | ..... | ..... | ..... | ..... |
| Kakwaltu | 77 | 37 | 40 | 43 | 34 | ..... | ..... | ..... | ..... | ..... | ..... | 77 | 37 | 40 | ..... | ..... | ..... | ..... | ..... | ..... |
| Kassan | 47 | 26 | 21 | 22 | 25 | 1 | 1 | ..... | ..... | ..... | ..... | 46 | 25 | 21 | ..... | ..... | ..... | ..... | ..... | ..... |
| Kichikan | 40 | 21 | 19 | 7 | 33 | 9 | 5 | 4 | 5 | 1 | 4 | 26 | 15 | 11 | ..... | ..... | ..... | ..... | ..... | ..... |
| Killisnoo | 79 | 51 | 28 | 45 | 34 | 44 | 31 | 13 | ..... | ..... | ..... | 33 | 18 | 15 | 2 | 2 | ..... | ..... | ..... | ..... |
| Klakwan | 326 | 176 | 150 | 186 | 140 | 3 | 3 | ..... | 3 | 1 | 2 | 320 | 172 | 148 | ..... | ..... | ..... | ..... | ..... | ..... |
| Klawak | 237 | 170 | 117 | 151 | 136 | 18 | 18 | ..... | 8 | 6 | 2 | 261 | 146 | 115 | ..... | ..... | ..... | ..... | ..... | ..... |
| Klinguan | 27 | 18 | 9 | 8 | 19 | 8 | 5 | 3 | ..... | ..... | ..... | 19 | 13 | 6 | ..... | ..... | ..... | ..... | ..... | ..... |
| Klukukhu | 15 | 7 | 8 | 6 | 9 | ..... | ..... | ..... | ..... | ..... | ..... | 15 | 7 | 8 | ..... | ..... | ..... | ..... | ..... | ..... |
| Lake bay | 31 | 20 | 11 | 15 | 16 | 3 | 3 | ..... | ..... | ..... | ..... | 23 | 17 | 11 | ..... | ..... | ..... | ..... | ..... | ..... |
| Loring | 200 | 133 | 67 | 65 | 135 | 27 | 27 | ..... | 2 | 1 | 1 | 120 | 54 | 66 | 51 | 51 | ..... | ..... | ..... | ..... |
| Metlakahla | 823 | 447 | 376 | 103 | 720 | 4 | 4 | ..... | 1 | ..... | ..... | 817 | 442 | 375 | 1 | 1 | ..... | ..... | ..... | ..... |
| Point Barrie | 92 | 50 | 42 | 42 | 50 | 3 | 3 | ..... | ..... | ..... | ..... | 89 | 47 | 42 | ..... | ..... | ..... | ..... | ..... | ..... |
| Point Ellis | 170 | 115 | 55 | 64 | 106 | 17 | 17 | ..... | 3 | 3 | ..... | 115 | 60 | 55 | 35 | 35 | ..... | ..... | ..... | ..... |
| Pybus bay | 26 | 15 | 11 | 14 | 12 | ..... | ..... | ..... | ..... | ..... | ..... | 26 | 15 | 11 | ..... | ..... | ..... | ..... | ..... | ..... |
| Pyramid harbor | 77 | 74 | 3 | 8 | 69 | 37 | 34 | 3 | ..... | ..... | ..... | ..... | ..... | ..... | 40 | 40 | ..... | ..... | ..... | ..... |
| Sakar | 21 | 14 | 7 | 11 | 10 | 1 | 1 | ..... | ..... | ..... | ..... | 20 | 13 | 7 | ..... | ..... | ..... | ..... | ..... | ..... |
| Salmon bay | 42 | 20 | 22 | 10 | 23 | 3 | 3 | ..... | 1 | 1 | ..... | 38 | 16 | 22 | ..... | ..... | ..... | ..... | ..... | ..... |
| Seymour channel | 0 | 7 | 2 | 2 | 7 | 6 | 6 | ..... | 3 | 1 | 2 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Sitka | 1,190 | 659 | 531 | 644 | 546 | 280 | 151 | 129 | 17 | 13 | 4 | 861 | 464 | 397 | 31 | 31 | ..... | 1 | ..... | 1 |
| Sundum | 42 | 23 | 11 | 21 | 21 | 1 | 1 | ..... | ..... | ..... | ..... | 41 | 22 | 10 | ..... | ..... | ..... | ..... | ..... | ..... |
| Tolstoi bay | 17 | 11 | 6 | 9 | 8 | 4 | 4 | ..... | ..... | ..... | ..... | 13 | 7 | 6 | ..... | ..... | ..... | ..... | ..... | ..... |
| Windham bay | 11 | 6 | 5 | 5 | 6 | 4 | 4 | ..... | ..... | ..... | ..... | 7 | 2 | 5 | ..... | ..... | ..... | ..... | ..... | ..... |
| Wrangell | 316 | 187 | 129 | 152 | 164 | 71 | 57 | 14 | 15 | 12 | 3 | 223 | 116 | 112 | 1 | 1 | ..... | 1 | 1 | ..... |
| Yakutat | 308 | 153 | 155 | 181 | 127 | 7 | 7 | ..... | 1 | ..... | ..... | 309 | 146 | 154 | ..... | ..... | ..... | ..... | ..... | ..... |
| Yoss bay | 85 | 59 | 26 | 18 | 67 | 13 | 12 | 1 | 3 | 2 | 1 | 43 | 19 | 24 | 26 | 26 | ..... | ..... | ..... | ..... |

POPULATION.

FOURTH OR NUSHAGAK DISTRICT.

| VILLAGES. | Total. | Male. | Fe- male. | Na- tive. | For- eign. | RACE AND COLOR. | | | | | | | | | | | | | | |
|---------------------------|--------|-------|--------------|--------------|---------------|-----------------|-------|--------------|--------|-------|--------------|---------|-------|--------------|------------|-------|--------------|-------------|-------|--------------|
| | | | | | | White. | | | Mixed. | | | Indian. | | | Mongolian. | | | All others. | | |
| | | | | | | Total. | Male. | Fe- male. | Total. | Male. | Fe- male. | Total. | Male. | Fe- male. | Total. | Male. | Fe- male. | Total. | Male. | Fe- male. |
| The district | 2,726 | 1,712 | 1,014 | 1,205 | 1,521 | 318 | 310 | 8 | 28 | 10 | 18 | 1,996 | 1,008 | 988 | 384 | 384 | | | | |
| Agivavik | 30 | 12 | 18 | 15 | 15 | | | | | | | 30 | 12 | 18 | | | | | | |
| Agulukpukmiut | 22 | 9 | 13 | 14 | 8 | | | | | | | 22 | 9 | 13 | | | | | | |
| Akakhpuk | 9 | 4 | 5 | 4 | 5 | | | | | | | 9 | 4 | 5 | | | | | | |
| Akgulurigiglak | 61 | 30 | 31 | 35 | 26 | | | | | | | 61 | 30 | 31 | | | | | | |
| Angnovohamiut | 16 | 7 | 9 | 7 | 9 | | | | | | | 16 | 7 | 9 | | | | | | |
| Aziavigamiut | 90 | 43 | 47 | 40 | 41 | | | | | | | 90 | 43 | 47 | | | | | | |
| Bradford | 166 | 165 | 1 | 11 | 155 | 82 | 81 | 1 | | | | 1 | 1 | | 83 | 83 | | | | |
| Carmel | 189 | 178 | 11 | 26 | 163 | 74 | 71 | 3 | 3 | 1 | 2 | 16 | 10 | 6 | 96 | 96 | | | | |
| Christangamiut | 83 | 37 | 46 | 55 | 28 | | | | | | | 83 | 37 | 46 | | | | | | |
| Gologamiut | 29 | 13 | 16 | 16 | 13 | | | | | | | 29 | 13 | 16 | | | | | | |
| Huektung | 32 | 17 | 15 | 22 | 10 | | | | | | | 32 | 17 | 15 | | | | | | |
| Iggvik | 60 | 34 | 26 | 34 | 26 | | | | | | | 60 | 34 | 26 | | | | | | |
| Igivachochamiut | 31 | 15 | 16 | 16 | 15 | | | | | | | 31 | 15 | 16 | | | | | | |
| Ikalukamiut | 60 | 28 | 32 | 35 | 25 | | | | | | | 60 | 28 | 32 | | | | | | |
| Insiachamiut | 42 | 20 | 22 | 20 | 22 | | | | | | | 42 | 20 | 22 | | | | | | |
| Kakchonak | 28 | 16 | 12 | 18 | 10 | | | | | | | 28 | 16 | 12 | | | | | | |
| Kakwok | 45 | 26 | 19 | 25 | 20 | | | | | | | 45 | 26 | 19 | | | | | | |
| Kamakanak | 53 | 26 | 27 | 29 | 24 | | | | | | | 53 | 26 | 27 | | | | | | |
| Kanulik | 54 | 25 | 29 | 31 | 23 | | | | | | | 54 | 25 | 29 | | | | | | |
| Kaskanak | 66 | 37 | 29 | 41 | 25 | | | | | | | 66 | 37 | 29 | | | | | | |
| Kassachamiut | 50 | 30 | 20 | 33 | 17 | | | | | | | 50 | 30 | 20 | | | | | | |
| Kavidonak | 13 | 9 | 4 | 8 | 5 | | | | | | | 13 | 9 | 4 | | | | | | |
| Kimnyak | 51 | 20 | 22 | 23 | 28 | 7 | 7 | | 5 | 2 | 3 | 39 | 20 | 19 | | | | | | |
| Kivichak | 37 | 22 | 15 | 21 | 16 | | | | | | | 37 | 22 | 15 | | | | | | |
| Koggiung | 133 | 64 | 69 | 86 | 47 | | | | | | | 133 | 64 | 69 | | | | | | |
| Meshik | 74 | 34 | 40 | 40 | 34 | | | | | | | 74 | 34 | 40 | | | | | | |
| Millerton | 165 | 163 | 2 | 10 | 155 | 70 | 68 | 2 | | | | | | | 95 | 95 | | | | |
| Napamiut | 11 | 7 | 4 | 5 | 6 | | | | | | | 11 | 7 | 4 | | | | | | |
| Niklikak | 42 | 24 | 18 | 20 | 22 | | | | | | | 42 | 24 | 18 | | | | | | |
| Noghelingamiut | 16 | 8 | 8 | 10 | 6 | | | | | | | 16 | 8 | 8 | | | | | | |
| Nulochtagamiut | 31 | 19 | 12 | 17 | 14 | | | | | | | 31 | 19 | 12 | | | | | | |
| Nushagak | 268 | 216 | 52 | 70 | 198 | 64 | 62 | 2 | 20 | 7 | 13 | 85 | 48 | 37 | 99 | 99 | | | | |
| Pakwik | 93 | 46 | 47 | 51 | 42 | 1 | 1 | | | | | 92 | 45 | 47 | | | | | | |
| Sahruyuk | 32 | 18 | 14 | 18 | 14 | | | | | | | 32 | 18 | 14 | | | | | | |
| Stugarok | 7 | 4 | 3 | 3 | 4 | | | | | | | 7 | 4 | 3 | | | | | | |
| Togiagamiut | 94 | 48 | 46 | 55 | 39 | | | | | | | 94 | 48 | 46 | | | | | | |
| Togiak | 14 | 5 | 9 | 6 | 8 | | | | | | | 14 | 5 | 9 | | | | | | |
| Trinachamiut | 20 | 8 | 12 | 9 | 11 | | | | | | | 20 | 8 | 12 | | | | | | |
| Ugashik | 154 | 92 | 62 | 73 | 81 | 20 | 20 | | | | | 123 | 61 | 62 | 11 | 11 | | | | |
| Ungashik | 190 | 91 | 99 | 112 | 78 | | | | | | | 190 | 91 | 99 | | | | | | |
| Yekuk | 65 | 33 | 32 | 32 | 33 | | | | | | | 65 | 33 | 32 | | | | | | |

POPULATION AND RESOURCES OF ALASKA.

FIFTH OR KUSKOKWIM DISTRICT.

| VILLAGES. | Total. | Male. | Fe-male. | Na-tive. | For-ign. | RACE AND COLOR. | | | | | | | | | | | | | | |
|-----------------------------|--------|--------|----------|----------|----------|-----------------|-------|----------|--------|-------|----------|---------|--------|----------|------------|-------|----------|-------------|--|--|
| | | | | | | White. | | | Mixed. | | | Indian. | | | Mongolian. | | | All others. | | |
| | | | | | | Total. | Male. | Fe-male. | Total. | Male. | Fe-male. | Total. | Male. | Fe-male. | Total. | Male. | Fe-male. | | | |
| | | | | | | | | | | | | | | | | | | | | |
| The district..... | 5, 081 | 2, 854 | 2, 827 | 3, 341 | 2, 340 | 24 | 19 | 5 | 17 | 5 | 12 | 5, 640 | 2, 830 | 2, 810 | | | | | | |
| Aguligamiut..... | 94 | 49 | 45 | 61 | 33 | | | | | | | 94 | 49 | 45 | | | | | | |
| Agumak..... | 41 | 19 | 22 | 25 | 16 | | | | | | | 41 | 19 | 22 | | | | | | |
| Ahgonekheleanghamiut..... | 15 | 6 | 9 | 7 | 8 | | | | | | | 15 | 6 | 9 | | | | | | |
| Ahgulakhpaghmiut..... | 19 | 9 | 10 | 11 | 8 | | | | | | | 19 | 9 | 10 | | | | | | |
| Ahguligamiut..... | 106 | 53 | 53 | 62 | 44 | | | | | | | 106 | 53 | 53 | | | | | | |
| Ahpokagamiut..... | 210 | 98 | 112 | 117 | 93 | | | | | | | 210 | 98 | 112 | | | | | | |
| Ahquenech-Khlugamiut..... | 6 | 3 | 3 | 4 | 2 | | | | | | | 6 | 3 | 3 | | | | | | |
| Akngamiut..... | 97 | 47 | 50 | 54 | 43 | | | | | | | 97 | 47 | 50 | | | | | | |
| Aktakehagamiut..... | 43 | 20 | 23 | 26 | 17 | | | | | | | 43 | 20 | 23 | | | | | | |
| Annovokhamiut..... | 15 | 9 | 6 | 9 | 6 | | | | | | | 15 | 9 | 6 | | | | | | |
| Apnhiaohamiut..... | 91 | 38 | 53 | 54 | 37 | | | | | | | 91 | 38 | 53 | | | | | | |
| Asknaghamiut..... | 138 | 73 | 65 | 80 | 58 | | | | | | | 138 | 73 | 65 | | | | | | |
| Achelugamiut..... | 39 | 20 | 19 | 20 | 19 | | | | | | | 39 | 20 | 19 | | | | | | |
| Bethel..... | 20 | 9 | 11 | 14 | 6 | 7 | 4 | 3 | | | | 20 | 9 | 11 | | | | | | |
| Chalitmiut..... | 358 | 183 | 175 | 224 | 134 | | | | | | | 358 | 183 | 175 | | | | | | |
| Chochinamiut..... | 84 | 44 | 40 | 51 | 33 | | | | | | | 84 | 44 | 40 | | | | | | |
| Chiminyangamiut..... | 40 | 20 | 20 | 22 | 18 | | | | | | | 40 | 20 | 20 | | | | | | |
| Chokfoktoleghagamiut..... | 13 | 10 | 8 | 16 | 8 | | | | | | | 13 | 10 | 8 | | | | | | |
| Chuligmiut..... | 32 | 16 | 16 | 20 | 12 | | | | | | | 32 | 16 | 16 | | | | | | |
| Dununuk..... | 48 | 27 | 21 | 26 | 22 | 3 | 3 | | | | | 45 | 24 | 21 | | | | | | |
| East Point, No. 1..... | 36 | 20 | 16 | 22 | 14 | | | | | | | 36 | 20 | 16 | | | | | | |
| East Point, No. 2..... | 41 | 23 | 18 | 25 | 16 | | | | | | | 41 | 23 | 18 | | | | | | |
| Ekaluktahugamiut..... | 24 | 13 | 11 | 13 | 11 | | | | | | | 24 | 13 | 11 | | | | | | |
| Etolugamiut..... | 25 | 14 | 11 | 20 | 5 | | | | | | | 25 | 14 | 11 | | | | | | |
| Gilakhamiut..... | 22 | 10 | 12 | 13 | 9 | | | | | | | 22 | 10 | 12 | | | | | | |
| Ighlakehagamiut..... | 81 | 40 | 41 | 47 | 34 | | | | | | | 81 | 40 | 41 | | | | | | |
| Ingeramiut..... | 35 | 18 | 17 | 20 | 15 | | | | | | | 35 | 18 | 17 | | | | | | |
| Kahlukhtughamiut..... | 29 | 15 | 14 | 16 | 13 | | | | | | | 29 | 15 | 14 | | | | | | |
| Kalmiut..... | 40 | 20 | 20 | 26 | 14 | | | | | | | 40 | 20 | 20 | | | | | | |
| Kailwigamiut..... | 157 | 81 | 76 | 90 | 67 | | | | | | | 157 | 81 | 76 | | | | | | |
| Kalkagamiut..... | 29 | 17 | 12 | 12 | 17 | | | | | | | 29 | 17 | 12 | | | | | | |
| Kanagamiut..... | 35 | 20 | 15 | 19 | 16 | | | | | | | 35 | 20 | 15 | | | | | | |
| Kanagamiut..... | 41 | 21 | 20 | 28 | 13 | | | | | | | 41 | 21 | 20 | | | | | | |
| Kashnahamiut..... | 232 | 119 | 113 | 132 | 100 | | | | | | | 232 | 119 | 113 | | | | | | |
| Kaviagamiut..... | 59 | 31 | 28 | 37 | 22 | | | | | | | 59 | 31 | 28 | | | | | | |
| Kenagamiut..... | 257 | 118 | 130 | 162 | 95 | | | | | | | 257 | 118 | 130 | | | | | | |
| Kennachananaghamiut..... | 181 | 93 | 88 | 108 | 73 | | | | | | | 181 | 93 | 88 | | | | | | |
| Kikiktagamiut..... | 119 | 57 | 62 | 67 | 52 | | | | | | | 119 | 57 | 62 | | | | | | |
| Kinegnagamiut..... | 92 | 44 | 48 | 50 | 42 | | | | | | | 92 | 44 | 48 | | | | | | |
| Kinegnagamiut..... | 76 | 38 | 38 | 40 | 27 | | | | | | | 76 | 38 | 38 | | | | | | |
| Kl-changamiut..... | 49 | 24 | 25 | 27 | 22 | | | | | | | 49 | 24 | 25 | | | | | | |
| Klutagamiut..... | 21 | 11 | 10 | 10 | 11 | | | | | | | 21 | 11 | 10 | | | | | | |
| Kochlogtogpamiut..... | 20 | 13 | 7 | 15 | 5 | | | | | | | 20 | 13 | 7 | | | | | | |
| Kolmakovsky..... | 26 | 14 | 12 | 19 | 7 | 8 | 7 | 1 | 10 | 8 | 7 | 8 | 4 | 4 | | | | | | |
| Koot..... | 117 | 55 | 62 | 70 | 47 | | | | | | | 117 | 55 | 62 | | | | | | |
| Koot river settlements..... | 74 | 36 | 38 | 43 | 31 | | | | | | | 74 | 36 | 38 | | | | | | |
| Kuskokhagamiut..... | 115 | 53 | 62 | 58 | 57 | | | | | | | 115 | 53 | 62 | | | | | | |
| Kwichepugagamiut..... | 25 | 14 | 11 | 16 | 9 | | | | | | | 25 | 14 | 11 | | | | | | |
| Kwigamiut..... | 43 | 22 | 21 | 28 | 15 | | | | | | | 43 | 22 | 21 | | | | | | |
| Lagoon, No. 1..... | 30 | 14 | 16 | 19 | 11 | | | | | | | 30 | 14 | 16 | | | | | | |
| Lagoon, No. 2..... | 36 | 17 | 19 | 24 | 12 | | | | | | | 36 | 17 | 19 | | | | | | |
| Lomavigamiut..... | 53 | 29 | 24 | 29 | 24 | | | | | | | 53 | 29 | 24 | | | | | | |
| Mumtrahamiut..... | 162 | 81 | 81 | 99 | 63 | | | | | | | 162 | 81 | 81 | | | | | | |
| Mumtrekhlagamiut..... | 33 | 16 | 17 | 20 | 13 | 5 | 4 | 1 | | | | 33 | 16 | 17 | | | | | | |
| Napamiut..... | 23 | 18 | 10 | 11 | 12 | | | | | | | 23 | 18 | 10 | | | | | | |
| Napaskeagamiut..... | 97 | 56 | 41 | 62 | 35 | | | | | | | 97 | 56 | 41 | | | | | | |
| Noh-chamiut..... | 28 | 14 | 14 | 18 | 10 | | | | | | | 28 | 14 | 14 | | | | | | |
| Novokhtolahamiut..... | 55 | 26 | 29 | 29 | 26 | | | | | | | 55 | 26 | 29 | | | | | | |
| Nunachanaghamiut..... | 135 | 69 | 66 | 77 | 53 | | | | | | | 135 | 69 | 66 | | | | | | |
| Nunavoknak-chlugamiut..... | 107 | 52 | 55 | 54 | 53 | | | | | | | 107 | 52 | 55 | | | | | | |
| Oh-hagamiut..... | 36 | 18 | 18 | 18 | 18 | | | | | | | 36 | 18 | 18 | | | | | | |
| Queekhpaghmiut..... | 75 | 38 | 37 | 47 | 28 | | | | | | | 75 | 38 | 37 | | | | | | |
| Queleochamiut..... | 112 | 61 | 51 | 71 | 41 | | | | | | | 112 | 61 | 51 | | | | | | |
| Quiechloh-chamiut..... | 83 | 39 | 44 | 52 | 31 | | | | | | | 83 | 39 | 44 | | | | | | |
| Quiechochlogamiut..... | 65 | 34 | 31 | 38 | 27 | | | | | | | 65 | 34 | 31 | | | | | | |
| Quilochugamiut..... | 12 | 7 | 5 | 6 | 6 | | | | | | | 12 | 7 | 5 | | | | | | |
| Quilaghamiut..... | 109 | 54 | 55 | 63 | 46 | | | | | | | 109 | 54 | 55 | | | | | | |
| Shinyagamiut..... | 7 | 4 | 3 | 3 | 4 | | | | | | | 7 | 4 | 3 | | | | | | |
| Shovonagamiut..... | 62 | 31 | 31 | 34 | 28 | | | | | | | 62 | 31 | 31 | | | | | | |
| Tofaknaghamiut..... | 195 | 101 | 94 | 119 | 76 | | | | | | | 195 | 101 | 94 | | | | | | |
| Tianghamiut..... | 60 | 31 | 29 | 36 | 24 | | | | | | | 60 | 31 | 29 | | | | | | |
| Tulukagnagamiut..... | 17 | 8 | 9 | 9 | 9 | | | | | | | 17 | 8 | 9 | | | | | | |
| Tulukagamiut..... | 62 | 33 | 29 | 35 | 27 | | | | | | | 62 | 33 | 29 | | | | | | |
| Tunaghamiut..... | 71 | 35 | 36 | 43 | 28 | | | | | | | 71 | 35 | 36 | | | | | | |
| Ugavigamiut..... | 57 | 25 | 32 | 30 | 27 | | | | | | | 57 | 25 | 32 | | | | | | |
| Ugokhamiut..... | 68 | 33 | 35 | 36 | 32 | | | | | | | 68 | 33 | 35 | | | | | | |
| Ukokamiut..... | 27 | 14 | 13 | 17 | 10 | | | | | | | 27 | 14 | 13 | | | | | | |
| Upper Chuligmiut..... | 30 | 15 | 15 | 19 | 11 | | | | | | | 30 | 15 | 15 | | | | | | |
| Yuisahle..... | 149 | 70 | 70 | 74 | 66 | 1 | 1 | | 7 | 2 | 5 | 149 | 70 | 70 | | | | | | |
| Woklohogamiut..... | 19 | 9 | 10 | 11 | 8 | | | | | | | 19 | 9 | 10 | | | | | | |

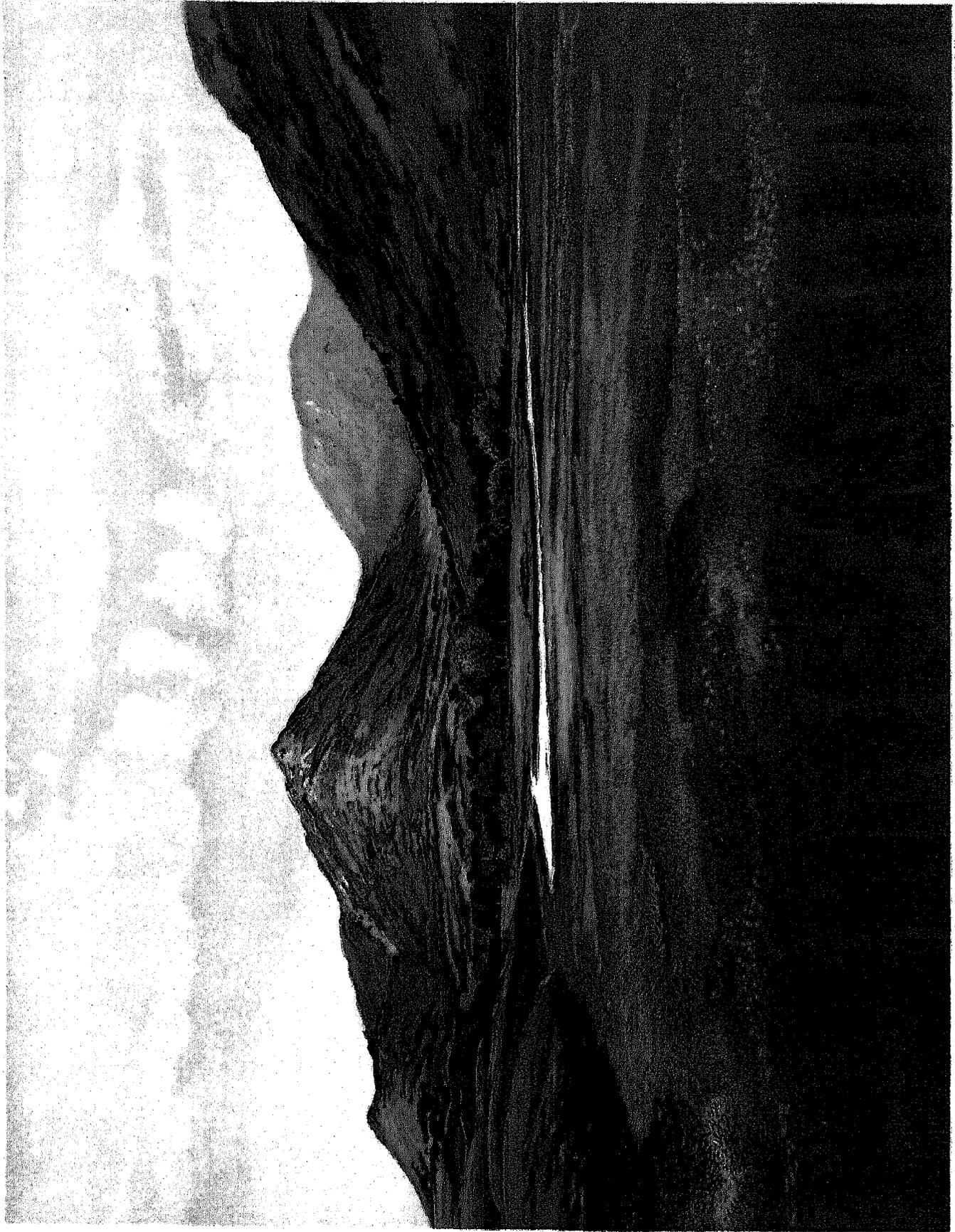
POPULATION AND RESOURCES OF ALASKA.

SEVENTH OR ARCTIC DISTRICT.

| VILLAGES. | RACE AND COLOR. | | | | | | | | | | | | | | | | | | | |
|--------------------------------|-----------------|-------|--------------|--------------|---------------|--------|-------|--------------|--------|-------|--------------|---------|-------|--------------|------------|-------|--------------|-------------|-------|--------------|
| | Total. | Male. | Fe- male. | Na- tive. | For- eign. | White. | | | Mixed. | | | Indian. | | | Mongolian. | | | All others. | | |
| | | | | | | Total. | Male. | Fe- male. | Total. | Male. | Fe- male. | Total. | Male. | Fe- male. | Total. | Male. | Fe- male. | Total. | Male. | Fe- male. |
| The district | 3,222 | 1,909 | 1,313 | 1,660 | 1,562 | 301 | 301 | | | | | 2,729 | 1,416 | 1,313 | 5 | 5 | | 97 | 97 | |
| Atnik | 34 | 18 | 16 | 21 | 13 | | | | | | | 34 | 18 | 16 | | | | | | |
| Cape Krusenstern | 45 | 24 | 21 | 28 | 17 | | | | | | | 45 | 24 | 21 | | | | | | |
| Cape Nome | 41 | 22 | 19 | 20 | 15 | | | | | | | 41 | 22 | 19 | | | | | | |
| Cape Smythe | 246 | 149 | 97 | 137 | 109 | 40 | 40 | | | | | 189 | 92 | 97 | 1 | 1 | | 10 | 10 | |
| Erkleetpaga | 20 | 10 | 10 | 14 | 6 | | | | | | | 20 | 10 | 10 | | | | | | |
| Golofnin bay | 25 | 12 | 13 | 12 | 13 | 2 | 2 | | | | | 23 | 10 | 13 | | | | | | |
| Icy Cape | 57 | 32 | 25 | 42 | 15 | | | | | | | 57 | 32 | 25 | | | | | | |
| Ignaluk | 85 | 45 | 40 | 44 | 41 | | | | | | | 85 | 45 | 40 | | | | | | |
| Ignitok | 64 | 28 | 36 | 38 | 25 | | | | | | | 64 | 28 | 36 | | | | | | |
| Itkarapaga | 8 | 5 | 3 | 5 | 3 | | | | | | | 8 | 5 | 3 | | | | | | |
| Kingaghee | 488 | 200 | 228 | 192 | 206 | | | | | | | 488 | 200 | 228 | | | | | | |
| Norikuk | 13 | 6 | 7 | 11 | 2 | | | | | | | 13 | 6 | 7 | | | | | | |
| Norion sound settle- ments. | 283 | 138 | 145 | 164 | 119 | | | | | | | 283 | 138 | 145 | | | | | | |
| Point Barrow | 152 | 91 | 61 | 80 | 72 | 1 | 1 | | | | | 149 | 82 | 61 | | | | 8 | 8 | |
| Point Betcher | 114 | 93 | 21 | 46 | 68 | 59 | 59 | | | | | 38 | 17 | 21 | 1 | 1 | | 10 | 10 | |
| Point Hope | 301 | 156 | 145 | 174 | 127 | 5 | 5 | | | | | 295 | 150 | 145 | | | | 1 | 1 | |
| Point Lay | 77 | 45 | 32 | 53 | 24 | | | | | | | 77 | 45 | 32 | | | | | | |
| Port Clarence | 485 | 420 | 65 | 230 | 249 | 270 | 270 | | | | | 144 | 79 | 65 | 3 | 3 | | 62 | 62 | |
| St. Lawrence island | 267 | 136 | 131 | 139 | 128 | | | | | | | 267 | 136 | 131 | | | | | | |
| Sea Horse island | 15 | 10 | 5 | 8 | 7 | 2 | 2 | | | | | 13 | 8 | 5 | | | | | | |
| Singok | 12 | 4 | 8 | 5 | 7 | | | | | | | 12 | 4 | 8 | | | | | | |
| Sledge island | 67 | 40 | 27 | 43 | 24 | | | | | | | 67 | 40 | 27 | | | | | | |
| Tapkak | 51 | 27 | 24 | 23 | 23 | | | | | | | 51 | 27 | 24 | | | | | | |
| Udivok | 200 | 100 | 100 | 87 | 113 | | | | | | | 200 | 100 | 100 | | | | | | |
| Wainwright inlet | 73 | 38 | 34 | 32 | 40 | | | | | | | 72 | 38 | 34 | | | | | | |

ELEVENTH CENSUS OF THE UNITED STATES.
ROBERT P. PORTER, SUPERINTENDENT.

ALASKA.



A. Heen & Co. Lith. Baltimore.

TYPICAL LANDSCAPE, CENTRAL ALASKA, WEST OF TIMBER LINE.

CHAPTER II.

GEOGRAPHY AND TOPOGRAPHY.

Since the publication of the report on Alaska prepared for the Tenth Census great progress has been made in ascertaining the geographic outlines and topographic features of the vast extent of country lying within the boundaries of Alaska.

The United States coast and geodetic survey has been for many years engaged in a careful and systematic survey of the islands, coasts, and waters of the Alexander archipelago, publishing from time to time revised maps of all Alaska whenever additional information is obtained by the office from reliable sources.

The glacier region situated to the northward of Cross sound and Icy strait, unknown in its contours 10 years ago, is now a place of call and one of the greatest attractions for the thousands of tourists who visit southeastern Alaska every summer.

The Alpine coast region, rising abruptly from the shores of the north Pacific between Cape Spencer on the east and Mount St. Elias on the west, has been the objective point of several exploring expeditions. Lieutenant Frederick Schwatka, formerly of the United States army, Professor Libbey, and Lieutenant Seton-Karr, of the British army, were among the first to attempt the exploration and partial ascent of Mount St. Elias, the giant among the mountain peaks of North America. They were followed later by well organized parties, under the auspices of the National Geographic Society and the United States geological survey. Under the leadership of Prof. I. C. Russell these parties have obtained in two successive seasons a large amount of the most valuable information concerning this mountain, which is claimed by Americans and English alike as lying within their boundaries.

In the course of his second exploration, Professor Russell, after reaching a height of 14,000 feet, succeeded in making measurements of Mount St. Elias from a base line on the seashore, from which the height of the mountain was computed at 18,100 feet. On the return journey the low coast region lying at the foot of the Malaspina glacial plateau was explored, and finally a series of observations was made in Disenchantment bay, at the head of Yakutat bay, furnishing material for the compilation of a reliable map of that estuary, exhibiting a remarkable deviation from the outlines heretofore accepted on the authority of Tebenkof and others, who did not personally explore the innermost recesses of this great bay.

Another important exploration, resulting in the collection of much information concerning the interior geography and topography of Alaska and adjoining territory in the British possessions, was made by Lieutenant Frederick Schwatka, accompanied by Dr. Hayes, of the United States geological survey. This expedition first set out in an easterly direction from Taku inlet along Taku river; then crossing the coast range they emerged upon the banks of Lake Aklene, which is probably the true head of the Yukon river. Following the northern outlet of this lake, the party passed the mouth of the tributary heretofore accepted as the Yukon's head, a few miles above Lake Labarge. Thence to Fort Selkirk their way was over a well known course, but on leaving that point an entirely new route was followed, leading toward the mountains forming the divide between the Yukon basin, the upper course of White river, and the easternmost tributary of Copper river. After discovering a pass but little over 5,000 feet in height, the party struck the Chityna river about midway between its headwaters and its junction with the Copper. The latter river was then followed to the coast.

Valuable additions have also been made to our knowledge of Alaskan geography by the members of an exploring expedition organized in 1890 under the auspices of Frank Leslie's Illustrated Weekly. The leaders of the party, Messrs. A. J. Wells, E. J. Glave, and A. B. Schanz, entered the interior by way of the Chilkat river, and after crossing the coast range came upon a large lake, the head of the Tah-kina tributary of the Yukon, which was named Lake Arkell. It is probable that this is the same lake which the German explorer Krause visited in 1879 and named Western Kussoa in contradistinction from the Eastern Kussoa which he found beyond the Chilkoot pass. Here Mr. Glave left the party, and, striking across the coast range southward, discovered the headwaters of the Asekh river, following down its channel to the coast at Dry bay. Messrs. Wells and Schanz proceeded to the Upper Yukon by the usual route. At Forty Mile creek Mr. Wells and another white man turned off, and, with the assistance of a miner who was engaged as guide, crossed over into the basin of the Tanana river and explored an unknown tributary of that stream. Mr. Schanz traveled down the Yukon to

St. Michael and thence back to the Kuskokwim portage and down that river to the seacoast, reaching Bristol bay in October. Here he was joined a month later by Mr. Wells and his party, who had followed the same route from the mouth of the Tanana river. During the months of January and February Mr. Schanz, in company with Mr. J. W. Clark, accomplished a dog-sledge journey of discovery, resulting in the definite location and exploration of a large lake to the northward of Lake Iliamna, the existence of which, though long known by reports of natives and mentioned in the Alaskan report of the Tenth Census, and vaguely indicated as Lake Kichik on the accompanying map, had never been verified. This has now been done and its outlines laid down from astronomical observations. This important sheet of water, some 75 miles long, was named Lake Clark. The Noghelin river, broken about midway by a magnificent fall, connects it with Lake Iliamna, of which it is the principal feeder.

The heretofore unknown course of the Copper river has been explored and mapped by Lieutenants Abercrombie and Allen, of the United States army, and the misleading feature of the former maps, giving this river a wide, open mouth, most inviting to the navigator, has been duly corrected.

The intricate waters and coast line of Prince William sound had been carefully surveyed and charted a century ago by Vancouver and his assistants, and but little that is new was added by the exploration of Mr. Samuel Applegate 5 or 6 years ago.

The long line of Alaskan coast and islands, extending from Prince William sound to the westernmost island of the Aleutian chain, has received but little attention in the way of scientific exploration during the last 10 years. A few corrected charts have been published by the coast survey of the region immediately adjoining the western extremity of the Alaskan peninsula and the Shumagin islands, and in addition a series of soundings has been made by the United States fish commission steamer Albatross, developing vast and heretofore unknown fishing banks.

On the waters and coast of Bering sea the only work of exploring, sounding, and surveying accomplished since 1880 has been done at odd times by the vessels of the United States revenue marine, and in 1890 by the Albatross, commanded by Captain Z. L. Tanner.

The great interior lying back of the Bering seacoast of Alaska, with its great rivers, low ranges of hills, and swampy plains, including the curious deltoid tundra land inclosed between the sea and the Kuskokwim and Yukon rivers, has been traversed, explored, and described by missionaries, traders, and prospectors in a cursory way, but the only discovery made and authenticated with astronomical observations in all this region is Lake Clark.

The great highway of northern Alaska, the Yukon river, has been so constantly traveled over by traders, miners, missionaries, and even the ubiquitous newspaper correspondent, as to leave but little room for new information concerning it. Its principal tributaries, the Tanana in the south and the Koyukuk in the north, have been explored and roughly mapped by Lieutenant Allen, but they are still comparatively unknown as to their real course and topographical details of their respective valleys.

Much geographical work has also been accomplished on the Upper Yukon and Porcupine rivers, under the auspices of the United States coast and geodetic survey, by the boundary survey parties of Messrs. McGrath and Turner, who spent two winters in that desolate region. The boundary was definitely located at its points of intersection with the principal streams, and one party succeeded in penetrating from the Porcupine river to the Arctic shore in the vicinity of Demarcation point.

To the northward of the Yukon basin, beyond the Arctic circle, much information has been obtained within the last 10 years, enabling our map makers to place new rivers hundreds of miles in length upon our charts, with much topographic detail of the surrounding country, which heretofore had been represented on our maps as a suggestive blank.

The explorations of Lieutenant J. C. Cantwell, of the United States revenue marine, and Lieutenant George M. Stoney, of the United States navy, have made known to us the basins of the great rivers Kowak and Noatak debouching into Kotzebue sound, and confirmed the existence of water routes connecting the headwaters of these rivers with the Colville and other streams in the vicinity of Point Barrow. Concerning the latter point and adjoining region, Lieutenant Ray, United States army, collected much valuable geographical data while in charge of the United States polar meteorological station.

Concerning the Arctic coast line of Alaska from Cape Prince of Wales to Demarcation point, valuable information is added annually by the work of the vessels of the revenue marine during their cruises. The United States steamer Thetis a few years ago succeeded in coasting the Arctic shore as far as Herschel island, near the mouth of the Mackenzie river.

This comprises the sum and substance of geographical work accomplished since our last report.

The coast of Alaska washed by the Pacific ocean begins at Dixon entrance, in latitude $54^{\circ}40'$; thence it sweeps northward and westward in a mighty curve, measuring over 1,200 miles, to the western extremity of the Alaska peninsula, and from here again the Aleutian chain of islands stretches far toward the coast of Asia in another long curve measuring nearly 1,000 miles, with its convexity to the south. The remaining coast of Alaska follows the lines of Bering sea, Bering strait, and Kotzebue sound, finally turning in a northeasterly direction from Cape Lisburne to Point Barrow, and thence eastward to the British boundary.

The highest latitude of that great bend of the coast to the eastward of Sitka, sometimes called the Gulf of Alaska, is $60^{\circ} 30'$, while the end of the curve at Issanak or Morzhovoi strait lies in latitude 55° . From this strait, which separates the peninsula from Unimak island, with its towering volcanic peaks robed in the bridal splendor of eternal snow, the island chain curves to the southward until the lowest latitude is reached near the meridian of Greenwich in $51^{\circ} 30'$, and thence westward and northward again to the island of Attu, the western extremity of the United States, in latitude 53° and longitude 173° east of Greenwich.

The westernmost point of the mainland of Alaska is found at Cape Prince of Wales, latitude $65^{\circ} 30'$ and longitude 168° west, while its northern extremity is at Point Barrow, latitude $71^{\circ} 20'$ and longitude $156^{\circ} 10'$.

From east to west, between our boundary on Portland canal and the island of Attu, Alaska covers 58 degrees of longitude. The distance between the southernmost of the Aleutian islands and the latitude of Point Barrow measures 20 degrees of latitude. The area of land within these lines has not been measured by actual survey, but estimated at 531,000 square miles, one-sixth of the total area of the United States.

From Dixon sound and Portland canal, in latitude $54^{\circ} 40'$, the mainland is shielded from the sea by a vast archipelago of islands, large and small, most of them being mountainous throughout, and all covered with a dense growth of spruce, hemlock, and cedar. The dimensions of this great accumulation of islands average about 75 miles east and west and 260 miles northwest and southeast, divided by hundreds of navigable passages. The number of these islands is given as 1,100, divided as follows: Prince of Wales island and those closely surrounding it, 135; from Portland canal to Caamaño, 134; from Cape Caamaño to the middle of Stikine straits, 77; between Chatham, Frederick, and Stikine straits, 350; Admiralty island and those surrounding it, 118; Baranof and adjacent islands, 138; Chatham strait north of Admiralty island, 29, and Chichagof and islands adjacent to Cross sound, 109. The fiords of Norway and the "scheres" of Finland sink into insignificance before the great dimensions of these straits and sounds. Among the larger passages dividing this archipelago, Chatham strait, named by Vancouver, is the most important, stretching in a straight line 195 miles in a northerly direction from Cape Ommaney, in latitude $56^{\circ} 10'$, to the mouth of Chilkat inlet, in latitude $59^{\circ} 40'$, with an average width of 7 or 8 miles and a great depth of water. Several large passages connect this waterway with other straits to the eastward and also with the sea north of Sitka. Of the latter, one called Peril or Destruction strait leads directly to Sitka, while the other consists of Cross sound or Icy strait, about 75 miles north of Sitka. The Alexander archipelago embraces a shore line of nearly 8,000 statute miles.

The outline of this section of Alaska is naturally a very irregular one on account of the numerous straits, bays, and islands. The south coast, facing upon Dixon sound and Portland canal and extending 80 miles from the latter westward to Cape Kaigan, exhibits numerous headlands and broken shores, steep hills, and mountains covered with dense forest to their summits. The mountains attain an elevation of from 2,000 to 3,000 feet, with scarcely a valley between them.

The extensive eastern arm of Dixon sound, called Portland canal by Vancouver, forms the southeastern dividing line between British Columbia and Alaska. It begins in latitude $54^{\circ} 41'$, and its northern head is in latitude $55^{\circ} 45'$ and longitude $149^{\circ} 54'$. The inlet is but a little over a mile in width.

On the island of Tongass, situated a little to the westward of the mouth of Portland canal, a military post was established soon after the transfer of Alaska to the United States, but it has since been abandoned; a few of the buildings, however, still remain, surrounded by the easternmost native villages of all Alaska. Cape Fox, the southerly extremity of the mainland within the American territory, is situated in latitude $54^{\circ} 45' 30''$. From the north side of Dixon sound several large passages extend to the northward: the Revilla Gigedo channel, or Tongass narrows, between Cape Fox and Cape Northumberland; Clarence strait, between Cape Northumberland and Cape Kaigan; and Cordova bay or strait, between Cape Chacon and Cape Kaigan, having connection with Bucarelli sound. The largest of these passages, Clarence strait, runs in a northwesterly direction for 120 miles, with an average width of from 15 to 20 miles, and finally mingles its waters with those of Chatham strait, its western shore being formed by Prince of Wales island. Strange to say, this large island, which has been known to the maritime nations of the globe for over 100 years, still remains unsurveyed, and has been variously named an island and an archipelago, and accounts of natives report numerous navigable passages cutting through it here and there. From the eastern side of Clarence strait great arms penetrate in a general northeasterly direction until they reach the base of the coast mountains; their waters are navigable, the shores bold and covered with timber, and the whole forms an intricacy of inland navigation difficult to describe in detail, and a chart affords but a faint idea of its perplexing grandeur. There seems to be no harbor on the mainland in this vicinity. The port of Wrangell is located on an island of the same name a short distance from the mouth of the Stikine river, in latitude $56^{\circ} 31'$ and longitude $132^{\circ} 23'$. The Russians had a small stockaded station here called Redoute St. Dionys, which was subsequently leased to the Hudson Bay Company. After the acquisition of the country by the United States a military post was established here, but was finally abandoned in 1877.

The Stikine is the largest river of southeastern Alaska, but lies within our boundaries for a distance of only 30 miles in an air line from its mouth. The Dominion government claims a boundary even nearer to the seacoast, including the spot where British ocean steamers land cargoes and passengers, and the advent of the British here has destroyed the once large transit trade of Wrangell. The interior of the country adjoining this

river is broken into a succession of sharply defined mountain ranges, separated by narrow, deep valleys similar to those between the islands of the coast.

The topography of the Alexander archipelago is the type of that of the interior of the mainland back of it within our boundaries. Beyond, on the upper rivers, within the British possessions, there is a large rolling plateau stretching between the coast range in the west and the prolongation of the Rocky mountains in the east. Like other Alaskan rivers, the Stikine takes its head from a succession of great lakes. A number of glaciers descend from the snow-covered peaks on both sides of the river down to its banks. The largest of these is situated on the right or west bank, with its face on the river 4 or 5 miles in width, and its length is said to be over 60 miles. The Indians relate that in ancient times this glacier extended across the river, forming an icy arch over the stream, but in course of time the spring freshets washed away the obstruction. Some officers of the Russian navy attempted to explore this huge glacier to its head, but they probably fell into one of the numerous chasms, as they were never heard of again.

One wide passage from the mouth of the Stikine to the ocean, called Sumner strait, runs westward between Prince of Wales island on the south and the Kehk archipelago on the north, reaching the sea between Cape Ommancy, on Baranof island, and Coronation island on the south. Another passage, Prince Frederick sound, runs from the mouth of the Stikine northward along the coast of the mainland and then westward between Admiralty island and the Kehk archipelago until it empties into Chatham strait. A branch of this channel, Stephens passage, runs northward between the mainland and Admiralty island until it mingles its waters with those of Chilkat inlet. At about the middle of its course Taku inlet opens on the east, and a little beyond this Douglas island divides the strait into two channels. Juneau city and Douglas city are situated on opposite sides of Gastineaux channel. From the junction of Stephens passage, Chilkat inlet, and Chatham strait, a wide channel, called Cross sound or Icy strait by the Russians, opens between the mainland on the north and Chichagof or Huna island on the south. Glacier bay extends in a northwesterly direction from the north shore of Cross sound, between Lynn canal, or Chilkat inlet, and the Pacific, for a distance of about 40 miles. About 20 miles from its mouth there is an island 5 or 6 miles in length named Willoughby island, and around the shores of the bay are 5 immense glaciers. The first, in the vicinity of Willoughby island, is about half a mile wide and 150 feet high; the next is about three-fourths of a mile wide and 200 feet high; the third, known among the Indians as the "great glacier", is situated at the head of the bay, and is about half a mile wide and from 200 to 300 feet high; the fourth, on the northern shore of the bay, is about half a mile wide and 150 feet high, and the fifth and smallest is about half a mile wide and 50 feet high. Nearly all the ice floating in this bay and Cross sound comes from these glaciers. The sea washes under them, honeycombs the ice by its incessant lapping, and pieces are broken off constantly. Prof. John Muir, an eminent geologist of the Pacific coast, describes another huge glacier located here, as follows:

On the northern shore of Glacier bay, north of Willoughby island, there is a large inlet, from 3 to 4 miles wide at its mouth. It runs to the northward and westward 5 miles, and at its head there is an immense glacier, which extends across the head of the inlet for a distance of 3 miles; 10 miles back from its face it is 10 miles wide, and near this, its greatest width, 16 branches of the first class unite to form one immense glacier; 4 of the 16 branches are each over 2 miles wide, while nearly all have tributaries; the distance from the face of the glacier to its farthest removed fountain is about 40 miles.

The port of Sitka is situated on the west coast of Baranof island, in latitude $57^{\circ} 2' 52''$, and longitude $135^{\circ} 17' 45''$.

West of Cross sound the coast mountain range attains an elevation of 14,000 to 18,000 feet, covered far down with perpetual snow, the highest peaks (Mount St. Elias, Fairweather, and Crillon) looming up in silent grandeur above them, visible in clear weather a distance of 150 miles at sea. From Lituya or Port des Francais westward the immediate seacoast is comparatively low, wooded ground, but closely backed by icy declivities that come down from the high mountain ranges, and at the head of Yakutat bay reach the coast land. This narrow strip of low coast, interrupted only in the vicinity of Icy bay by a succession of precipitous glaciers fronting the sea for 15 or 20 miles, extends to the mouth of the Copper river. Here the sediment carried down from the mountains has been deposited for thousands of years, until a vast, low delta has been formed, through which the waters of the river find their way to the sea in numerous channels. In many places the swift current has scooped large basins and lagoons out of this soft material, the whole presenting the spectacle of a perfect labyrinth of lakes and streams. The mountains rise up abruptly from the northern edge of this flat to a height of 8,000 or 9,000 feet.

Vistas of the far interior are afforded here and there by the gradually sloping masses of glacier ice. West of the Copper river the foot of the Chugatch alps is bathed by the sea without any intervening lowland, with only two or three exceptions, and these have been utilized for the location of settlements. The mountains on the northern side of Prince William sound must reach a height of 10,000 or 12,000 feet, all densely wooded up to about a height of 1,000 feet, and covered with eternal snow from their summits to within 3,000 or 4,000 feet of the sea level. The interior of Prince William sound or the Gulf of Chugatch forms a basin almost entirely landlocked, being sheltered on the south by the islands of Nuchek and Montague; but, although thus surrounded on all sides by land, it is by no means a calm and pleasant sheet of water to navigate, as furious gales and "woollies", or mountain squalls,

sweep down the mountain sides without a moment's warning, compelling the luckless traveler in a small craft or canoe to seek the lee of one of the hundreds of islands and capes studding the coast. Immense glaciers on the northern shore are constantly descending into the sea and shedding fragments of ice, both large and small, that are carried off by the tide in compact fields or loose masses, still more endangering navigation. The western shore of the sound, the northeast coast of the Kenai peninsula, is very much cut up into deep bays and fiords, and everywhere mountains can be seen looming up in the background with snowy peaks and ridges. The deepest indentation in this section of the coast of the peninsula is Resurrection bay, which was long years ago utilized by the Russians as a shipyard. This bay affords the only harbor in the vicinity, though its entrance is beset with islands and the approach made difficult to sailing vessels. From Resurrection bay in a southwesterly direction the coast is one succession of deep fiords, but, exposed as it is to the fierce easterly gales prevailing here at nearly all times of the year, it is shunned by navigators, especially because even the deepest and most extensive bays do not afford a single anchorage, so that vessels entering them to find refuge from storms would still be at the mercy of the tides.

The entrance to Cook inlet, or the Gulf of Kenai of the Russians, lies between Cape Elizabeth on the southwestern extremity of the Kenai peninsula and Cape Douglas, a bold promontory jutting out from the Alaskan peninsula. Nearly half way between the two is a group of bleak, naked rocks, called the Barren islands, which, placed as they are in midchannel of the tide rushing into Cook inlet from the ocean, cause violent and irregular tidal currents, very dangerous and perplexing to the navigator. During calm weather the so-called "tide-rip" will toss a craft about more violently than any sea stirred up by wind, and a sailing vessel caught within a few miles of the Barren islands in the "tide-rip" without wind is irresistibly drawn to destruction upon the rocks.

Just above its mouth the waters of Cook inlet widen out into the Gulfs of Kamishak on the west and Kachemak (also called Kachekmak and Chugachik) on the east. On the east shore the mountains are not high, and contain extensive coal veins of an inferior quality, but on the west the main Alaskan chain of mountains rears up several volcanic peaks to a considerable height, rising abruptly from the seacoast, with a narrow belt of shelving woodland intervening. North of the indentations mentioned the shores of Cook inlet again approach each other to a distance of not over 30 miles between Anchor point on the east and Mount Isaac on the west. From this point northward and eastward the eastern shore is low and flat, with an elevation of from 50 to 100 feet above the sea. High ridges of mountains traverse the interior and eastern side of the Kenai peninsula, but between them and the coast there is a strip of marshy tundra, wooded along the river courses, and varying from 40 to 50 miles in width. The Kassilof and Kenai rivers, both important salmon streams, form the outlets of a system of lakes that bathe the foot of the snow-capped mountain chain, the backbone of the Kenai peninsula. As the inlet contracts still farther, especially between the promontories of East and West Foreland, the tides increase in velocity and violence of action until they attain a speed of 8 or 9 knots, with an average vertical rise and fall of 24 to 26 feet. The northeastern extremity of this vast inlet or gulf, which Cook entered with the expectation of finding a northwest passage, and, being disappointed, applied to it the name of "Turnagain", equals in tidal phenomena the Bay of Fundy. The flood comes in in a huge "bore", with thundering noise and astonishing rapidity, and a traveler advancing with it in a canoe experiences the peculiar sensation of seeing one high bank of clay and gravel after another apparently sinking before him as he is lifted up and carried over by the impouring tide. From the mountains surrounding this branch of the inlet innumerable avalanches sweep down the rocky and wooded slopes, demolishing large sections of forest and piling up rocky débris to such an extent as to cause frequent and total changes in the aspect of the country, while the outlines of the coast undergo equally perceptible modifications from the action of the tides.

What the country north of Cook inlet is like no civilized man can tell, as in all the years of occupation of the coast by the Caucasian race it has remained a sealed book. The Indians tell us that the rivers lead into lakes, and that the lakes are connected by rivers with other lakes again, until finally the waters flow into the basins of the Tanana and the Yukon; but conflicting with this intermingling of the waters are stories of mountains of immense altitude visible for hundreds of miles. The natives living north of this terra incognita give, however, similar descriptions, which may be accepted until reliable explorers are enabled to penetrate this region.

On the western side of Cook inlet the main Alaskan chain of mountains, called by Dall the Chigmit range, rises abruptly from the sea in steep ridges and peaks, the highest two being the Redoute and the Iliamna mountains, both volcanic and emitting smoke. Only at two points along this coast within the inlet does low land intervene between the mountains and the shores, at Toyonok and Kustatan, both of which localities have been utilized by the natives for establishing settlements. Up to the height of about 1,000 feet all these mountains are densely wooded. From Kamishak gulf, situated between Mount Isaac and Cape Douglas, a portage is made, over a slight depression in the ridge to the basin, to the great Lake Iliamna, but on the southwestern shore of the bay the mountains rise again to a considerable height, culminating in the 4 peaks to the westward of Cape Douglas. The last named cape is one of the most prominent and boldest in shape of the many Alaskan promontories, jutting out as it does at a right angle for a distance of several miles into the sea, with a sudden descent of over 1,000 feet into the waves of Cook inlet.

The same chain of mountains extends down the south coast of the peninsula, varying in height between 5,000 and 8,000 feet, with peaks much eroded by glacial and meteorological action. The numerous glaciers existing throughout the upper regions of this mountain chain do not anywhere approach the seacoast, as is the case with Mount St. Elias and the Chugatch alps, these formations being found only at high altitudes, generally facing westward and southward.

Two distinct and continuous lines of "water mark" can be observed along the whole of this chain, one at an altitude of 1,000 feet, the other perhaps 500 or 600 feet higher. Both of these lines show the effects of the wash of the ocean for ages, together with many petrifications of mollusks and other marine life. The natural conclusion forced upon the observer is that the whole peninsula of Alaska has undergone two successive periods of elevation from volcanic action, and that this region would afford a highly interesting field of research to geologists. It is a significant fact that no glacial action is observable below the upper sea level. The immediate seacoast here is cut up into innumerable fiords and coves and lined with rocky islets.

The term "mountain chain" applied above to the elevated portion of the peninsula does not, perhaps, quite describe a very peculiar formation. The mountains or mountain groups are interrupted from time to time by depressions, but these do not at all bear the character of mountain passes, as they consist of low, marshy plains, extending entirely across the peninsula, varying very much in width. A similar formation can be found on the coast of Prince William sound, where outlying spurs of the main chain are frequently divided in the same way. The impression created in the mind of the beholder is not that of a continuous alpine chain, but rather of a series of islands, such as the Aleutians, raised by successive volcanic action until the straits between them are left dry. These depressions serve as the portage routes across the peninsula. A careful observer could easily recognize distinct islands in the mountain groups of Morzhovoi and Belkovsky, connected with each other and with the Pavlovsk volcanic group only by low, swampy isthmuses. Again the mountain groups opposite the Shumagin islands containing the Veniaminof and other volcanoes, loom up, entirely isolated by similar depressions, north and south. Between Moller and Portage bays the portage is made in an hour from the waters of the North Pacific ocean to those of Bering sea.

Other swampy passages lead through from the Chignik and Kishulik bays to the north coast of the peninsula. Nearly all these isolated mountain sections bear a peculiar resemblance to the outward shape of the island of Unimak, the first of the Aleutian chain that is actually separated from the peninsula, though only by a strait too shallow to be navigable. That an elevation of this region has taken place is confirmed by abundant evidence, and altogether it does not seem at all improbable that what now resembles from a distance a long mountain range was once a chain of islands.

At Cape Atushagwik the coast of the peninsula approaches nearest to that of Kadiak island, the width of the strait here being only a little over 18 miles.

In the vicinity of Katmai both coal and petroleum have been found, but not in abundant quantity or excelling in quality.

The volcanic group of the Pavlovsk mountains stands, as already mentioned, entirely isolated with its two craters, of which one is still active, while the other is reported to have been extinct since 1786. From this region also samples of coal of inferior quality have been procured. South of Pavlof bay another volcano rears its jagged crown, separated both north and south from the other mountains.

In the neighborhood of Belkovsky and Morzhovoi several volcanic peaks can be observed, but they have not been active within historic times.

On rounding the southern extremity of the peninsula and turning northward and eastward, a total change in the aspect of the coast can be observed. Low, sandy reaches and slightly elevated moorlands cover the wide interval between the mountains and the shores of Bering sea, interrupted here and there by lake-fed streams and rivers. In the vicinity of Ugashik the volcanic character of the country disappears entirely, the rock formation being altogether of granite and quartz, and pumice stone and chalk are only washed up by the sea. All along the coast from here we encounter gray granite, hornblende, serpentine, porphyry, and sandstone, but at an altitude of about 300 feet above sea level parallel strata containing fossil bivalves appear on the faces of bluffs. As we advance northward the interval between mountains and seacoast widens, until in the vicinity of Lakes Naknek and Bocharof swampy plateaus nearly 100 miles in width are found, dotted with many lakes.

Proceeding northward along the coast of the mainland the first deep indentation of the shore line is Bristol bay, into which the waters of Lake Iliamna flow through the Kvichak river. From the southern extremity of the Alaskan peninsula to this point Port Moller affords the only harbor for shipping through three rivers, the Sulina, the Igagik, and the Naknek, flowing into Bering sea from the mountains in the east. In the vicinity of the mouths of the last two streams the shore is high and rocky, but only few traces of volcanic action can be discovered. North of Lakes Iliamna and Clark high mountains of the main Alaskan range protrude between that sheet of water and the Nushagak river, its spurs approaching nearest the coast immediately behind the Nushagak post and settlement. Other spurs of the same range of mountains and isolated groups of hills appear at long distances from each other on the coast of Bering sea, the intervals being filled up apparently with alluvial, swampy soil, not altogether

level, but gently rolling. The earliest intelligent observer of this region, the Russian missionary Veniaminof, described the conformation of this section of the country as follows:

Slight elevations can be found along the whole extent of the American coast of Bering sea; they are in nearly all cases connected with the mountains in the interior. If the observer ascends to a height the country appears to him like a heaving ocean suddenly become stationary, with its waves transformed into sand and mud; these waves are now covered with vegetation, but their outlines are still very striking. In the midst of this dry sea we find occasionally high, rocky islands entirely separated from the neighboring hills.

To the westward of Nushagak the mountains first reach the coast on both sides of the Bay of Kulluk. The summits of this range as seen from the lakes forming the portage between the Bays of Kulluk and Nushagak are very jagged in outline, rising abruptly in almost perpendicular blocks and peaks too steep to afford lodgment for snow. The capes and headlands jutting out from this range into the sea are frequently composed of sandstone worn into fantastic shapes by the action of the tides and changes of temperature. The next great elevated headland is Cape Newenham, which forms the terminal point of a rather low range of hills running parallel with the left bank of the Kuskokwim west of the Tuluksak river. At Cape Newenham these hills culminate in two towering peaks between 2,000 and 3,000 feet in height. Between this point and Cape Vancouver in the north the country on both sides of the wide estuary of the Kuskokwim is evidently of an alluvial formation, low and swampy. Both at Cape Vancouver and on the island of Nunivak lava is found, in addition to many other evidences of volcanic origin, and the same is true of the islands further off the coast, St. Matthews and St. Lawrence. At Cape Rumiantzof, in latitude $61^{\circ} 47'$, is another aggregation of volcanic hills rising like mountainous islands from the tundra.

The delta of the great Yukon is of course entirely alluvial, with the exception, perhaps, of the isolated hills of Kusilyak, which give indications of volcanic origin. From the northern mouth of the Yukon eastward the south coast of Norton sound consists of low, rocky hills of lava and basalt. Between the small streams of Pastolik and Pastoliak are high bluffs of basalt, and the sandstone cape of Vsachaghik looms up between 400 and 500 feet from the sea level. The islands of St. Michael and Stuart are comparatively recent lava formations, and contain several extinct craters. The traditions of the natives here speak of the island of St. Michael as having risen from the ocean, and old people living in Tebenkof's time related to him that twice within their recollection the whole island was covered by the sea. From St. Michael northward the chain of low hills, composed of lava and basalt, runs parallel with the coast, averaging in height from 200 to 300 feet, but at a distance of about 30 miles inland a few peaks attain a height of between 1,000 and 1,500 feet. At Cape Denbigh a granite formation appears, jutting out into the sea at a right angle with the volcanic range of hills. The shores of Norton bay are low, and all the alluvial deposits contain bones, tusks, and skeletons of the mammoth and mastodon. On the north coast of Norton sound we find the deep indentation of Golovin bay between two high points, Cape Derby and Stony cape. The interior at the head of Golovin bay is low, and a portage route extends thence by means of lakes and rivers to Grantley harbor. From Stony cape to Cape Rodney the shore is low and level, but in the interior a few high mountains covered with snow are visible.

To the northward of Cape Rodney is situated the best harbor in the northern waters, Port Clarence, with an interior basin named Grantley harbor. The harbor is utilized by the whaling fleet for refitting and meeting their tenders bringing supplies of stores and coal. From here the low, rocky coast trends westward, culminating in the prominent headland of Cape Prince of Wales, the westernmost extremity of the North American continent.

A low, sandy shore extends in a northeasterly direction from Cape Prince of Wales to Cape Espenburg, broken only by the shallow waters of Shishmaref inlet. Cape Espenburg is the western headland of the broad but shallow gulf known as Kotzebue sound, the waters of which are freshened by the outpouring flood of several great rivers, the Buckland, the Kowak, the Noatak, and the outlet of Selawik lake.

Beyond Cape Krusenstern, which forms the northern headland of Kotzebue sound, the coast line runs northeasterly to Cape Lisburne, a steep eminence rising abruptly from the sea, but about half way between the two points a remarkable low, sandy tongue of land, backed by steep cliffs at its landward end, forms Point Hope, known also as a point of rendezvous for whalers and traders.

From Cape Lisburne to Point Barrow the general direction of the coast is northeasterly. Its conformation is generally low and rocky, with many outlying shoals and sandy islets. The few headlands between the two capes are named Point Lay, Icy cape, and Point Belcher. Beyond Point Barrow the coast continues in an easterly direction to Demarcation point, at the point of intersection of the 141st meridian with the arctic coast.

The length of coast line of Alaska's mainland and islands is nearly four times that of all other parts of the United States combined, as exemplified in the subjoined statement furnished by the United States coast and geodetic survey:

| | STATUTE MILES. |
|---|----------------|
| California, including islands..... | 1,280 |
| Oregon | 382 |
| Washington, including islands..... | 2,028 |
| Alaska, including islands..... | 26,364 |
| Atlantic coast, including islands | 2,043 |
| Gulf coast | 1,810 |
| Total | 33,907 |

CLIMATE.

The climate of the Alaskan coast regions is much milder, even in the higher latitudes, than it is in the interior or in corresponding latitudes on the Atlantic coast. This is easily explained and understood when the natural forces productive of this milder temperature are contemplated.

The most important among them is a thermal current resembling the Gulf Stream in the Atlantic. This current known as the Japanese or Kuro Siwo, has its origin under the equator near the Molucca and Philippine islands, passes northward along the coast of Japan, and crosses the Pacific to the southward of the Aleutian islands, after throwing a branch through Bering sea, in the direction of Bering strait. The main current strikes the coast of British Columbia, where it divides again, one branch turning northward toward Sitka, and thence westward to the Kadiak and Shumagin islands.

The comparatively warm waters of these currents affect the temperature of the superjacent atmosphere, which, absorbing the latent heat, carries it to the coast with all its mollifying effect. Thus the oceanic and atmospheric currents combine in mitigating the coast climate of Alaska, and this process is greatly aided by the configuration of the extreme northwestern shores of the Pacific, backed as they are with an almost impenetrable barrier of lofty mountains, which holds back from the interior the warm, moist atmospheric currents coming in from the ocean, deflecting at the same time the ice-laden northern gales from the coast to the interior.

The force of these influences as mitigating the climate of Alaska can be seen from the following table:

| SITKA, ALASKA (LATITUDE 57° 3'). | | | | | HALIFAX, NOVA SCOTIA (LATITUDE 44° 38'). | | | | |
|------------------------------------|-------------------|--------------------|--------------|--------------|--|-------------------|--------------------|--------------|--------------|
| YEARS. | Lowest in winter. | Highest in summer. | Mean summer. | Mean winter. | YEARS. | Lowest in winter. | Highest in summer. | Mean summer. | Mean winter. |
| 1880..... | | | | | 1880..... | - 0° | 90° | 61.9° | 26.1° |
| 1881..... | | 79° | 54.0° | | 1881..... | 0 | 90 | 59.6 | 24.0 |
| 1882..... | 4° | 70 | 53.4 | 33.5° | 1882..... | - 8 | 90 | 61.8 | 25.1 |
| 1883..... | 8 | 68 | 52.1 | 30.8 | 1883..... | - 8 | 82 | 61.0 | 21.2 |
| 1884..... | 11 | 75 | 54.4 | 35.6 | 1884..... | -11 | 88 | 60.0 | 24.2 |
| 1885..... | 15 | 75 | 56.3 | 35.1 | 1885..... | -11 | 84 | 62.1 | 24.4 |
| 1886..... | 4 | 72 | 55.3 | 34.4 | 1886..... | - 8 | 84 | 62.1 | 25.6 |
| 1887..... | 3 | 72 | 52.5 | 31.1 | 1887..... | - 7 | 93 | 62.7 | 25.5 |
| 1888..... | | | | | 1888..... | - 5 | | | 22.0 |
| 1889..... | | | | | 1889..... | - 8 | 84 | 62.1 | 27.0 |
| NAIN, LABRADOR (LATITUDE 56° 10'). | | | | | PORTLAND, MAINE (LATITUDE 43° 39'). | | | | |
| 1880..... | | | | | 1880..... | - 3 | 94 | 68.4 | 30.5 |
| 1881..... | | | | | 1881..... | - 6 | 88 | 66.3 | 26.0 |
| 1882..... | | | | | 1882..... | -12 | 94 | 68.7 | 30.4 |
| 1883..... | -26 | 77 | 48.7 | -1.3 | 1883..... | 1 | 89 | 68.0 | 25.3 |
| 1884..... | | | | | 1884..... | - 8 | 80 | 67.3 | 26.6 |
| 1885..... | | | | | 1885..... | - 6 | 90 | 65.7 | 25.1 |
| 1886..... | | | | | 1886..... | -12 | 94 | 64.0 | 23.3 |
| 1887..... | | | | | 1887..... | -15 | 96 | 65.5 | 21.3 |
| 1888..... | | | | | 1888..... | -12 | 96 | 64.6 | 21.8 |
| 1889..... | | | | | 1889..... | - 8 | 92 | 65.0 | 26.4 |

To the southward of Cook inlet lies the Kadiak group of islands, which presents a possible field for settlement and improvement in the near future. We find here both forests and grassy plains and hills, with a climate such as to throw no obstacles in the way of cattle breeding and sheep raising on a large scale in many favored localities. The table on the following page shows the mean temperature and rainfalls in this favored section of Alaska for a series of years. When we scan these figures we can feel no surprise on being told that a band of sheep has existed and done well for 11 years here, without shelter throughout the year, and with but very little feeding.

GEOGRAPHY AND TOPOGRAPHY.

MEAN TEMPERATURE, MAXIMUM AND MINIMUM, AND RAINFALL AT KADIAK, LATITUDE 57° 38' N., FROM JULY, 1881, TO SEPTEMBER, 1890.

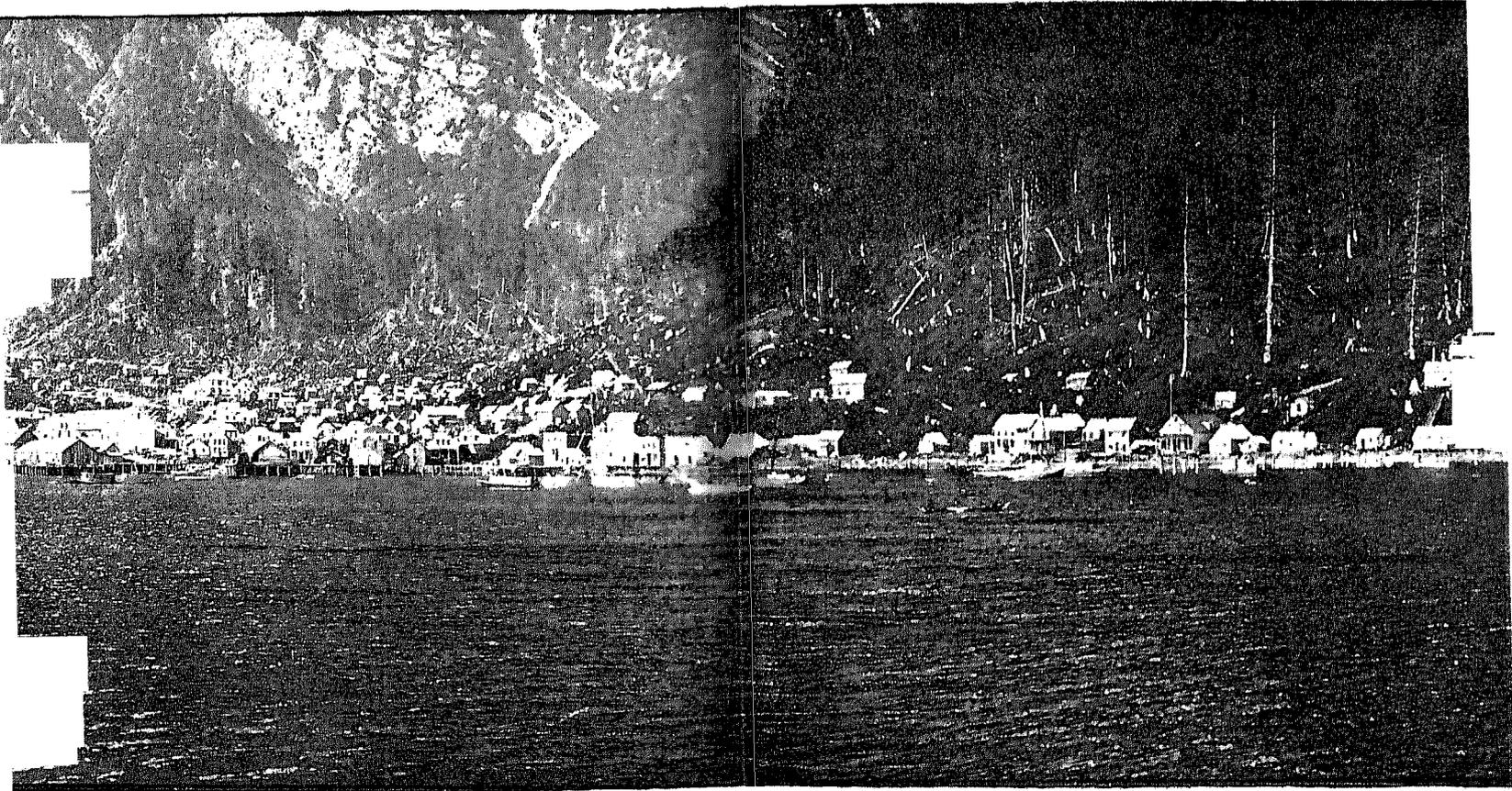
[From observations by Frederick Sargent.]

| MONTHS. | 1881 | | | | | | Rain. <i>Inches.</i> | 1882 | | | | | | Rain. <i>Inches.</i> |
|-----------------|--------------|---------|---------|----------|---------|---------|-----------------------------|--------------|---------|----------|---------|-------|---------|-----------------------------|
| | TEMPERATURE. | | | | | 7 a. m. | | TEMPERATURE. | | | | | 7 a. m. | |
| | 7 a. m. | 2 p. m. | 9 p. m. | Highest. | Lowest. | | | 2 p. m. | 9 p. m. | Highest. | Lowest. | | | |
| January | | | | | | | 31.4° | 33.3° | 31.4° | 40° | 14° | 3.45 | | |
| February | | | | | | | 16.2 | 22.0 | 17.8 | 39 | —2 | 5.08 | | |
| March | | | | | | | 28.1 | 34.8 | 30.5 | 46 | 14 | 1.23 | | |
| April | | | | | | | 31.9 | 37.5 | 32.4 | 49 | 19 | 0.60 | | |
| May | | | | | | | 41.4 | 45.5 | 41.6 | 57 | 33 | 0.94 | | |
| June | | | | | | | 48.7 | 52.0 | 48.4 | 73 | 41 | 7.25 | | |
| July | 59.0° | 59.2° | 54.5° | 78° | 46° | 2.42 | 50.8 | 54.7 | 51.0 | 75 | 44 | 4.20 | | |
| August | 62.2 | 65.9 | 50.6 | 78 | 52 | 1.13 | 51.5 | 59.1 | 52.0 | 64 | 47 | 8.45 | | |
| September | 50.6 | 55.8 | 50.9 | 65 | 45 | 6.50 | 46.8 | 52.4 | 47.8 | 61 | 42 | 7.50 | | |
| October | 45.1 | 50.0 | 44.4 | 58 | 24 | 4.73 | 40.1 | 43.1 | 39.7 | 52 | 24 | 17.83 | | |
| November | 35.2 | 39.9 | 37.5 | 50 | 24 | 8.75 | 32.5 | 35.7 | 33.4 | 46 | 16 | 8.53 | | |
| December | 21.5 | 23.7 | 22.2 | 43 | 7 | 4.65 | 29.1 | 31.3 | 30.1 | 39 | 17 | 0.41 | | |
| | 1883 | | | | | | | 1884 | | | | | | |
| January | 32.2 | 34.2 | 33.1 | 40 | 22 | 11.90 | 32.8 | 35.4 | 32.8 | 41 | 23 | 12.32 | | |
| February | 25.3 | 33.0 | 30.5 | 44 | 18 | 3.15 | 29.8 | 36.1 | 31.0 | 44 | 20 | 3.50 | | |
| March | 34.0 | 39.0 | 34.0 | 49 | 27 | 0.40 | 34.0 | 38.3 | 35.0 | 47 | 28 | 5.68 | | |
| April | 33.2 | 39.7 | 35.6 | 48 | 26 | 6.73 | 39.0 | 45.7 | 40.0 | 50 | 29 | 5.33 | | |
| May | 40.8 | 42.7 | 40.8 | 52 | 38 | 11.00 | 45.5 | 48.5 | 43.8 | 57 | 37 | 3.30 | | |
| June | 47.5 | 51.8 | 48.4 | 62 | 41 | 5.14 | 51.4 | 57.1 | 51.0 | 74 | 44 | 3.20 | | |
| July | 50.0 | 55.2 | 50.8 | 62 | 47 | 5.05 | 56.8 | 62.2 | 54.3 | 73 | 45 | 1.67 | | |
| August | 52.5 | 54.3 | 53.1 | 69 | 48 | 5.98 | 53.5 | 56.3 | 52.5 | 72 | 46 | 5.98 | | |
| September | 49.3 | 53.3 | 49.4 | 62 | 44 | 11.82 | 43.4 | 52.2 | 47.1 | 64 | 43 | 3.50 | | |
| October | | | | | | | 36.6 | 40.0 | 36.2 | 53 | 21 | 4.69 | | |
| November | | | | | | | 33.5 | 37.5 | 35.0 | 44 | 18 | 8.88 | | |
| December | 28.0 | 29.6 | 29.4 | 39 | 12 | 10.50 | 33.2 | 35.5 | 33.8 | 42 | 23 | 4.87 | | |
| | 1885 | | | | | | | 1886 | | | | | | |
| January | 35.5 | 36.8 | 35.5 | 42 | 23 | 10.36 | 28.0 | 31.2 | 27.5 | 42 | 12 | 2.11 | | |
| February | 25.8 | 31.3 | 27.5 | 40 | 11 | 2.55 | 26.8 | 32.0 | 27.9 | 46 | 10 | 2.28 | | |
| March | 30.4 | 36.7 | 31.7 | 46 | 14 | 7.16 | 30.2 | 35.9 | 30.8 | 45 | 19 | 2.22 | | |
| April | 37.6 | 42.8 | 37.4 | 51 | 20 | 2.32 | 34.0 | 40.0 | 34.3 | 48 | 23 | 1.63 | | |
| May | 45.3 | 51.3 | 44.5 | 65 | 39 | 5.24 | 42.9 | 48.6 | 42.3 | 68 | 36 | 2.24 | | |
| June | 49.1 | 53.8 | 49.4 | 75 | 44 | 1.03 | 48.9 | 53.2 | 48.1 | 68 | 42 | 4.86 | | |
| July | 53.6 | 59.0 | 53.8 | 71 | 40 | 3.62 | 56.3 | 60.8 | 56.0 | 76 | 51 | 2.07 | | |
| August | 53.8 | 57.1 | 53.7 | 65 | 51 | 5.66 | 53.6 | 59.3 | 53.1 | 71 | 46 | 3.61 | | |
| September | 48.4 | 52.3 | 48.7 | 63 | 37 | 7.81 | 48.4 | 56.5 | 48.7 | 61 | 42 | 6.33 | | |
| October | 43.6 | 46.0 | 44.0 | 51 | 31 | 11.86 | 39.2 | 44.0 | 39.7 | 52 | 29 | 4.26 | | |
| November | 29.0 | 33.0 | 30.5 | 44 | 11 | 1.92 | 33.2 | 34.8 | 32.8 | 42 | 18 | 7.51 | | |
| December | 31.2 | 31.0 | 29.1 | 41 | 15 | 6.17 | 36.5 | 37.7 | 36.7 | 42 | 29 | 14.53 | | |
| | 1887 | | | | | | | 1888 | | | | | | |
| January | 22.9 | 24.2 | 22.3 | 41 | 0 | 1.97 | 28.8 | 32.0 | 29.8 | 41 | 9 | 3.06 | | |
| February | 20.8 | 33.4 | 30.0 | 42 | 12 | 0.89 | 33.2 | 38.2 | 33.4 | 42 | 19 | 0.90 | | |
| March | 25.6 | 31.4 | 26.6 | 38 | 14 | 1.77 | 30.3 | 40.0 | 35.5 | 53 | 17 | 2.94 | | |
| April | 33.5 | 37.3 | 34.1 | 40 | 22 | 7.83 | 31.3 | 39.3 | 29.3 | 54 | 12 | 2.24 | | |
| May | 35.3 | 42.8 | 38.6 | 55 | 32 | 3.05 | 43.3 | 49.2 | 43.6 | 64 | 35 | 6.94 | | |
| June | 46.8 | 51.9 | 47.5 | 60 | 41 | 4.72 | 49.4 | 56.3 | 50.1 | 66 | 38 | 4.40 | | |
| July | 47.4 | 51.9 | 48.5 | 62 | 44 | 8.02 | 51.5 | 52.2 | 51.5 | 69 | 48 | 1.01 | | |
| August | 49.8 | 55.4 | 50.5 | 67 | 40 | 9.02 | 52.3 | 60.9 | 55.8 | 69 | 50 | 1.38 | | |
| September | 46.6 | 52.5 | 47.2 | 63 | 37 | 6.29 | 48.3 | 51.1 | 48.3 | 61 | 36 | 8.84 | | |
| October | 39.1 | 44.5 | 40.3 | 52 | 31 | 6.68 | 41.4 | 44.4 | 41.2 | 54 | 27 | 6.66 | | |
| November | 31.8 | 34.7 | 31.1 | 44 | 16 | 4.46 | 25.8 | 32.3 | 28.0 | 46 | 13 | 3.23 | | |
| December | 24.7 | 26.4 | 24.2 | 40 | 0 | 2.76 | 34.6 | 35.8 | 34.1 | 43 | 16 | 15.26 | | |

POPULATION AND RESOURCES OF ALASKA.

MEAN TEMPERATURE, MAXIMUM AND MINIMUM, AND RAINFALL AT KADIAK, ETC.—Continued.

| MONTHS. | 1889 | | | | | Rain. <i>Inches.</i> | 1890 | | | | | Rain. <i>Inches.</i> |
|-----------------|--------------|---------|---------|----------|---------|-------------------------|--------------|---------|---------|----------|---------|-------------------------|
| | TEMPERATURE. | | | | | | TEMPERATURE. | | | | | |
| | 7 a. m. | 2 p. m. | 9 p. m. | Highest. | Lowest. | | 7 a. m. | 2 p. m. | 9 p. m. | Highest. | Lowest. | |
| January | 35.3° | 37.1° | 34.9° | 43° | 24° | 11.65 | 27.4° | 31.6° | 28.5° | 49° | 12° | 0.77 |
| February | 33.8 | 34.9 | 34.1 | 41 | 10 | 6.32 | 27.1 | 33.7 | 29.6 | 47 | 8 | 0.87 |
| March | 36.2 | 40.8 | 37.1 | 54 | 27 | 3.96 | 28.8 | 35.9 | 29.7 | 49 | 9 | 3.58 |
| April | 36.1 | 41.4 | 37.0 | 65 | 19 | 3.30 | 35.7 | 38.1 | 31.9 | 48 | 14 | 2.99 |
| May | 43.7 | 49.1 | 43.6 | 76 | 39 | 3.86 | 42.6 | 47.7 | 42.9 | 58 | 38 | 5.63 |
| June | 48.6 | 52.9 | 48.6 | 70 | 43 | 7.98 | 48.3 | 52.5 | 47.8 | 72 | 43 | 4.20 |
| July | 52.0 | 56.7 | 52.0 | 73 | 48 | 5.02 | 54.0 | 59.7 | 54.0 | 79 | 45 | 3.05 |
| August | 69.5 | 53.7 | 48.5 | 62 | 39 | 8.06 | 53.6 | 57.5 | 53.5 | 67 | 48 | 3.55 |
| September | 47.5 | 53.7 | 48.5 | 62 | 39 | 7.98 | | | | | | |
| October | 42.8 | 47.1 | 43.4 | 52 | 33 | 8.90 | | | | | | |
| November | 36.6 | 39.4 | 36.8 | 47 | 24 | 9.15 | | | | | | |
| December | 32.2 | 35.7 | 32.0 | 45 | 12 | 1.28 | | | | | | |



JUNEAU.

CHAPTER III.

THE FIRST OR SOUTHEASTERN DISTRICT.

The first or Southeastern district of Alaska, comprising the territory bounded by the parallel of Mount St. Elias on the north, the Pacific ocean on the west, and the British Columbian boundary on the east and south, has undergone remarkable changes during the past decade. When the enumeration of this section was made for the Tenth Census in the month of June, 1880, the number of its white or civilized inhabitants did not reach far into the hundreds; its mineral resources were known to but few, and only one or two surface mining claims were in actual operation during the summer months. The salmon canning industry was still in its infancy, and the struggling villages of Sitka and Wrangell could scarcely advance any tangible reason for present existence or hope of future growth. But even at that early date this "panhandle" district of Alaska was favored above all other sections of the territory in having a ship of war stationed at Sitka, the commander of which exercised a mild, paternal authority, while the marines and sailors did duty as local police. The only other government official was the collector of customs, with a few deputies scattered far beyond his reach, and with nothing to do but to inform his department chief at stated intervals of his opinion on Alaskan affairs. With gratifying regularity the Secretaries of the Navy and of the Treasury were informed by these two officials that "All was quiet in Alaska", though neither had any means of hearing directly from the immense area of the mainland of Alaska lying beyond their immediate ken.

Before, however, the year 1880 had joined the column of historical dates an event occurred which has since worked a wonderful change in the outward appearance as well as the industrial life and growth of southeastern Alaska. A French half-breed named Juneau discovered gold-bearing ore on Douglas island, situated between the waters of Stephens passage and Gastineaux channel, and though auriferous quartz veins had been previously known to exist at various points of the district, Juneau's discovery was the first to attract large capital, and therefore marks the turning point in Alaska's fortunes.

Many other deposits were found in the immediate vicinity, but the origin and growth of the towns of Juneau and Douglas city are due entirely to the gradual development of the Paris or Treadwell mine; without its ever present stimulus other ventures would not have survived the struggles of infancy, so fatal to incipient enterprise as well as to human kind.

The development of this mine, with its large force of employes, and its stimulating effect upon prospecting and tributary industries, created a freight movement which enabled a steamship company to inaugurate regular trips, carrying mails and blossoming out during the summer months into a lucrative excursion service, which has done more than any other means toward making known this part of Alaska to the general public and attracting capital for investment. With increasing prosperity and importance came a louder demand for some attention on the part of the United States government, and at last, in the year 1885, the territory was organized as a civil district, with a governor, district judge and attorney, United States marshal and deputies, and a few United States commissioners, all appointed by the President. A system of public and subsidized schools was inaugurated under the auspices of the Interior Department with the help of an annual subvention from the United States treasury, a system which, after first taking root in the southeastern section, has since extended its ramifications over the length and breadth of Alaska.

At the present day the towns of Juneau and Douglas supply the only examples in Alaska of American frontier settlements affording the ordinary necessities and conveniences of civilized life. The capital, Sitka, can not yet be placed in this category, and while Wrangell is still hovering upon the verge of an uncertain existence, the western fishing and trading posts do not extend to the hapless visitor even the most ordinary comforts of shelter, bed, and nourishment.

Under such circumstances the taking of the census was beset with difficulties even in this the most civilized section of Alaska, and unfortunately the obstacles in the way of the hapless enumerator in the shape of scarcity and excessive cost of the most primitive means of transportation were accentuated by an almost universal misapprehension of the scope and nature of census work here and a deficiency of statistical records.

Taking into consideration these facts, the final result of the effort to obtain reliable statistics must reflect great credit upon the energy and perseverance of the special agents intrusted with the field work in southeastern Alaska, whose monographs, describing and discussing the salient features of their own particular districts, are here incorporated as most valuable contributions to the report.

DESCRIPTION OF SOUTHEASTERN ALASKA FROM CAPE FANSHAW TO THE SOUTHERN BOUNDARY.

BY MINER W. BRUCE.

The extent of territory embraced in my census district is best described by commencing at a point at the lower or southerly portion of southeastern Alaska near 54° 40' north latitude, thence following what is known as the boundary line between British Columbia and Alaska to a point opposite Cape Fanshaw, thence through Frederick sound and Chatham strait to the Pacific ocean, thence following these waters through Dixon entrance to the place of beginning.

To give the number of miles traveled to complete the enumeration would be a matter of sheer guesswork on my part, in view of the tortuous unsurveyed channels and sounds through which my course lay.

The time consumed in covering this territory was from May 14 to October 29. My means of traveling was a canoe hewn out of a cedar log, 35 feet long, and capable of carrying 6 persons and 3 months' supplies. The state of the weather always determined the distance traveled, especially when on the "outside", on the Pacific ocean. Even the inland waters were at times so turbulent that a canoe could not live in the heavy seas, and in places the tides surged with such force as to require every exertion on the part of the whole crew to enable us to make any headway at all.

I kept an accurate account of meteorological conditions during the whole time, and have divided them into 3 classes: cloudy, rainy, and sunny. At times it would be cloudy in the forenoon and the sun would shine in the afternoon, or it would rain part of the day and become clear for the rest, but I have, when these changes occurred, given one class or the other credit for a half day each, which is approximately correct.

When the sun shone the atmosphere was as clear as crystal, and all nature seemed to take on a new and beautiful life. When it rained, it was impossible to conceive of more dreary or lonesome surroundings, and if the wind happened to blow, the dismal sighing of the evergreen trees and the rocking of the canoe over the foaming waters impressed one with a sense of loneliness which it was impossible to shake off.

My weather record may be summed up as follows: in the month of May, from the 14th to the 31st, inclusive, 2.5 days were cloudy, 9.5 rainy, and 6 sunny; in June, 2 were cloudy, 10 rainy, and 18 sunny; in July, 10.5 were cloudy, 6 rainy, and 14.5 sunny; in August, 8.5 were cloudy, 6.5 rainy, and 16 sunny; in September, 6 were cloudy, 14.5 rainy, and 9.5 sunny; in October, from the 1st to the 29th, inclusive, 5.5 were cloudy, 15.5 rainy, and 8 sunny.

As the population of my district was mainly confined to the islands, it became necessary to sail entirely around most of them, the largest of which are Kupreanoff, Kuiu (or Kubu), Zarembo, Wrangell, Etolin, Revilla Gigedo, Gravina, Annette, Long, and Prince of Wales, the last named island being one of the most extensive in area within the territory of Alaska.

The number of natives belonging to this district not enumerated I do not think will exceed 150, most of whom were hunting and fishing among the mountains, working at the salmon canneries in British Columbia, or hop picking in the state of Washington. It must be remembered also that a few Haida and Kake, and perhaps a couple of hundred Tsimpeans, were temporarily at work in the northern half of the Southeastern district, and as a matter of course were returned as a part of the inhabitants thereof. (a)

FORT WRANGELL.

One of the most interesting places in this portion of the territory is Fort Wrangell. It is one of the earliest settlements made by the Americans after Alaska passed into the possession of the United States, and is situated upon the northern extremity of Wrangell island, which embraces about 8 or 10 square miles. The town is located on the side of a mountain having a southern exposure. Like all mountains in this part of the territory, its surface is covered with a heavy growth of fir trees, and the stumps found all through the village indicate that at one time the timber extended to the water's edge.

The soil here seems to be very light, and the little effort made at gardening is evidently in soil made by clearing away the moss and filling in with earth and decayed vegetable matter. Outside the village the soil is very wet, and wherever a level place occurs it is very difficult to walk about. In the northern part of the village there is a trail 3 or 4 feet wide and half a mile or so long, and poles have been laid down to walk upon. If one happens to step upon one that is decayed or where one has been removed, he quickly sinks to his knees in mud and mire. All through the village, if one ventures off the walks, a wet foot is pretty sure to follow, unless he picks his way over roots or rocks.

For several years after Alaska passed into possession of the United States a garrison of troops was stationed here. A 2-story log building with 2 wings extending at right angles with each other forms two sides of a sloping parade ground, while several buildings which were used for officers' quarters form the other side, leaving the southern exposure free to command approach from the water. A blockhouse about 50 feet high, like the other

a The omissions mentioned by Mr. Bruce have been rectified.



SOUTHEASTERN ALASKAN SCENERY.

buildings which comprised the soldiers' quarters, is an imposing structure. The material from which all the buildings are constructed presents splendid specimens of the timber which is found in this portion of the territory. The sides of the blockhouse are perforated with loopholes, which command every direction. The substantial character of all these buildings shows that they were constructed with a view to effectually guard against surprise and to protect the occupants from assault by Indians. In the center of the parade ground stands a flagstaff, and near it upon this square is one of the most unique specimens of the native "totems" found in Alaska.

Upon the well preserved shingles on the roofs of these old buildings a covering of moss has formed, telling of years of exposure to constant moisture.

At the time of the rich placer gold discoveries in the Cassiar district, which lies north of Fort Wrangell, in the interior of the mainland and within British territory, Fort Wrangell was the most important point in Alaska. It was the shipping point of all the supplies for that district, and they were transported to the head of navigation on the Stikine river by light draft steamers, and thence to the mining camps by pack trains. Fort Wrangell was at that time a rendezvous for miners, and the old settlers tell of the stirring times which accompanied the miners' return from the gold fields to spend the long winter months at this place.

These mines have long since been abandoned, except by a few miners, chiefly Chinese, who are content with small wages, and who have passed out of the state of feverish unrest which is so common to rich gold discoveries, when dirt is quickly abandoned as soon as it ceases to pay \$10 per day to the man. Most of the miners who come from that district in the autumn now go either to Victoria or farther down the coast to spend the winter.

During the season of 1890 the prospect of an early return of the former exciting times was manifest from the fact that 3 or 4 companies had been formed for the purpose of reopening the abandoned diggings, and extensive preparations were made for hydraulic work, which so often has proved successful after mining with the gold pan and rocker has ceased to pay. There seems to be a general opinion that these old mines will pay to operate under this system, and if this proves correct, Fort Wrangell may again become an important point and secure permanency as a town.

Some of the finest bodies of timber found in southeastern Alaska are in the vicinity of Fort Wrangell, and the largest sawmill in the territory, having a capacity of 30,000 feet per day, is one of the few industries here. It is a model of architectural design, and its large buildings shelter improved machinery. It is owned by Messrs. Sylvester & Wilson, both old pioneers, the former being one of the earliest white settlers, who for a quarter of a century has been identified with a number of commercial enterprises in Alaska and British Columbia.

One of the longest sand beaches found in this portion of the territory is here, extending for three-quarters of a mile in a semicircle, and along this shore the houses are built, many of them in such close proximity to the water that when the tides are high the waves come to the very doors.

Fort Wrangell has a pretty harbor, and in the autumn, after the return of the whites and natives from the season's work, the different small craft lying at anchor present a scene that is novel and striking.

Of the half dozen stores here 3 or 4 carry stocks of goods which in quality and variety will compare favorably with those in many country towns in the states. A feature which strikes one as odd is the good quality of goods used by the people in this country. The clothing and blankets are as a rule of superior quality, and the groceries used by the natives as well as the whites are of the best. To such a degree is this true that the "traveling man" on his first visit is surprised to hear the merchant tell him that he wants nothing but the best of his wares.

At Fort Wrangell is found the greatest variety of "curios" anywhere in this part of the territory. The natives who, until the recent advent of the salmon canneries, came from long distances to dispose of their relies at this place, still to a large extent follow their old custom. Many of the finest furs are also brought here. About 4 miles from here are 2 garnet mines, and the Alaska diamond is found in this vicinity. The garnet is much sought after, for it can be had either in rough or cut and polished, and when in the latter state is quite handsome. When seen in the rough the garnets are half imbedded in a brittle sort of slate and sandstone, and look as if they had been dropped into it when the rock was soft. They vary in size from that of a pea to a walnut, and are nearly round, with a surface of regular crystalline facets. The "Alaska diamonds" found here are beautiful specimens, very brilliant, and are sold as low as 25 cents each.

Among the houses in Fort Wrangell are 2 church edifices, one belonging to the Presbyterian society and the other to the Roman Catholics. The Catholic church withdrew from the field a few years ago, abandoning it to the Presbyterians, who still keep up their organization, and a regularly ordained minister is located here. His congregation is mainly composed of natives, and they are, as a rule, devout and regular in their attendance at church.

The civil officers at Fort Wrangell consist of a United States commissioner, a deputy United States marshal, and a deputy collector of customs. The commissioner has duties similar to those of a justice of the peace, and before him are brought those charged with crime or minor offenses. He has power to bind a prisoner over to the United States district court, but it may be said to the credit of the whites and natives in this part of the territory that his court docket rarely contains an entry of a desperate character.

The deputy marshal's duties are not such as to make his office one of severe labor, but, as an offset, his compensation is not large enough to make the office much sought after.

The duties of the deputy collector of customs are principally to see that no liquors or dutiable goods are smuggled into Alaska from British ports, but it is apparent that he requires much better facilities for executing his authority in order to stop the liquor traffic across the British line and among the natives in southeastern Alaska.

Fort Wrangell boasts of the only poultry farm in southeastern Alaska, and the owner declares that fowl can be raised successfully and profitably. He finds no trouble in disposing of all the eggs his hens produce at 50 cents per dozen.

The houses occupied by the natives are usually of neat appearance, with a number of pretty cottages among them. Those built by the natives during the early settlement of the country are of logs, 1 story high, usually having but 1 large room, and frequently several families occupy a single house. This room is divided into sections, or rather each family has its particular part, which contains their beds or sleeping couches. Their boxes and personal belongings are in this particular section, while in the center of the room is a dirt or gravel fireplace, where the various families do their cooking. The smoke ascends to the roof and makes its escape through a hole usually 2 or 3 feet square. A screen of boards or logs is placed on the roof to windward, so as to prevent the rain from beating in.

Many of the natives at Fort Wrangell have cook stoves in their houses, and also furniture similar to that of the whites, and with scarcely an exception they dress in civilized garb. Many of them speak English, and are industrious as a class.

The whites living here have not for many years felt any uneasiness as to their personal safety, and the instances of depredation upon their persons or property by the natives have been exceedingly rare.

One of the earliest missionary efforts made here was the establishment of a home or boarding school under the auspices of the Presbyterian church. But a few years ago, after it had begun to demonstrate its usefulness to the natives, it was accidentally destroyed by fire and it has not been rebuilt. The only school now at Fort Wrangell is one supported by the general government, and is under the supervision of Mrs. Thomas, who has for some years been connected with school work in Alaska. Her devotion to the natives has won for her the respect of the whites and the love of the natives. The average number of scholars who attend the school is about 25, but in the winter this number is considerably increased.

The trail, of which mention has been made, extending from the rear of the village, leads in the direction of the only salmon cannery in this vicinity, at Labouche bay. Its capacity is about 15,000 cases annually, and the fish packed here are caught mostly with gill nets, this cannery and the one at Burroughs bay being the only ones in this portion of the territory which secure their salmon in this way. The fish are caught in the bay near the mouth of the Stikine river, and it is said that the run of salmon here is earlier than in any other locality in this vicinity; they are usually of a larger variety, and this cannery since its first establishment 5 years ago is said never to have failed to secure a full pack.

The Stikine is a large river, in fact the only navigable stream in southeastern Alaska, and those who profess to know say that it contains fish in sufficient numbers to supply 3 or 4 more canneries of the capacity of the one now here.

The fishing season had closed when I visited this cannery and the season's pack had been shipped. The usual pack of 15,000 cases had been secured. But 3 white men were there, and they were left to look after the property until the following season's work commences. During the fishing season about 25 whites, 25 Chinese, and a large number of natives are employed. The cost of the plant is in the neighborhood of \$40,000. Fishing with gill nets involves the necessity of having a much larger number of small boats than usual, and consequently a greater expense is incurred, but the depth of water and the absence of any smooth beach prevents the hauling of seines.

LORING.

Loring is the largest and oldest fishing station in this part of southeastern Alaska. Its annual salmon pack averages about 23,000 cases, and the supply of salmon does not seem to have diminished in the 10 years that the station has been in operation. It is situated on Naha bay, on the west side of Revilla Gigedo island. For a number of years salmon were salted here and shipped in barrels to market, and this is carried on by the company at the present time to some extent. It is the first post office after reaching Alaskan territory from the states, and mail matter for the lower settlements and missionary stations, as well as Port Chester and the canneries at Yess bay and Burroughs bay, comes here, and is distributed in such manner and at such times as occasion permits.

The cannery at this point is equipped with all the latest improved machinery, and when running to its full capacity 400 cases of salmon can be packed per day.

About 50 Chinese are employed here during the fishing season, and a large number of native men, women, and children find work both in the cannery and in catching fish. The white help numbers about 20 males.

A large number of the natives find employment in bringing fish to the cannery in their canoes, some being brought a distance of 40 or 50 miles. A swift and thoroughly equipped steam launch is kept busy plying between the cannery and 3 fishing stations on the east side of Prince of Wales island transporting fish.

During 8 months of the year Loring has the appearance of being a thriving village. About 40 native houses are scattered along the sides of the mountain, some of them being neatly constructed and nicely furnished. A number of Tsimpsean natives come here each season from Port Chester, and many of the Tongass, Haida, and Cape Fox natives are also employed or come here to trade.

The company has an extensive general merchandise store and deals largely in furs. The principal shipments of skins, however, are those of the deer, large numbers of which are brought here by the natives every season. The company has in the neighborhood of \$50,000 invested.

An industry in which a dozen or more native families are engaged at this point is the manufacture of fish oil from the dogfish, this locality being particularly favorable for catching them in large numbers. The oil is made by themselves, the company having no financial interest in the enterprise, simply selling them the barrels used, and attending to the shipment and sale of it as a matter of accommodation and to encourage the people.

During the winter there are usually but half a dozen whites here, most of those employed during the fishing season, as well as all the Chinese, returning to their homes in the coast states for the winter. The natives also return to their respective villages, where they enjoy a season of rest or go on their hunting excursions.

YESS BAY.

The cannery settlement known as Yess bay is situated on the mainland, about 25 miles north of Loring. It is at the head of a beautiful body of water, which extends in about 2 miles from the west side of Behm canal. The bay is about 1 mile wide, the mountains rising abruptly on either side, and the water is so deep that the largest steamers that sail in Alaskan waters find no difficulty in floating up to within a few feet of the cannery buildings.

This station was for a number of years used for the salting of salmon, but 3 years ago a cannery, having a capacity for packing 15,000 cases, was erected. This cannery enjoys the reputation of never failing to secure all the fish wanted for its season's pack, and there are 2 or 3 streams within a few miles that can be made to contribute largely to its nearer supply, if necessary. There are about 30 Chinese usually employed here, with a dozen white men and a large number of native men and women. The cost of the plant will probably aggregate \$25,000.

The only fish traps I found in my district were in successful operation here. Deep nets are fastened to piles driven into the bottom of the bay, resembling a heart in shape, with one side extending along piles for quite a distance. With this extension the fish in their attempts to ascend the river come in contact and follow it along into the trap, and when once in they can not find their way out, as their instinct impels them to go against the current only. At the time of my visit the trap fairly swarmed with salmon. As many as 5,000 were taken out each day, but as the company had about completed its pack, the superintendent told me he should remove it at once. Trap fishing in this section of Alaska, it is claimed, has not heretofore proved successful, on account of the depth and clearness of the water in localities where fish are found, but experiments made here have demonstrated the fact that this sort of fishing can be made a success if the traps are properly constructed.

The company makes no effort to do a large merchandise business, keeping on hand only such goods as will meet the temporary wants of its employes during the fishing season. But 1 white man remains here from December 1 to April 1, his duties being simply to look after the property, and most of the natives return to their villages. Yess bay cannery is about 25 miles from the regular route of steamers, and they only run in here to deliver freight and take away the season's pack.

BURROUGHS BAY.

This cannery settlement is located at the head of Burroughs bay, which extends into the mainland about 6 miles from the extreme north end of Behm canal. It averages about 3 miles in width. The cannery is located about 1 mile from the mouth of the Unuk river, which is quite a large stream and but little known. The capacity of the cannery is about 15,000 cases. Besides fishing here, the company keep men at Stewart river, another large stream emptying into Behm canal, about 20 miles to the southeast of Burroughs bay. They also have a fishing station a few miles farther down.

The fishing at Burroughs bay is done mainly with gill nets. Attempts have been made to trap salmon near the mouth of the Unuk river, but without success, on account of the rapidly shifting quicksand. Burroughs bay settlement contains about 30 buildings. The houses of the natives are all of a temporary character. I found some Chinese employed here and probably 70 or 80 natives. Many women and children work in the cannery, while the men are usually employed in catching fish. The men are paid according to the number of fish caught, and as but 2 men are necessary for each crew, one to pull the boat and the other to look after the net, it is not an unusual thing for them to make \$5 or \$6 apiece per day during the fishing season.

About a dozen white men are employed here, and a steam launch plies as a tender between the outside fishing stations and the cannery. The fishing at each of the outside stations is done with seines. The capital invested by the company here is given as \$25,000. The pack of 1890 was 12,000 cases.

At the close of the season, or from the middle of October until the middle of April, this place is abandoned by the employes, and all the natives return to their winter villages. During the winter of 1889 and 1890 but 1 white man was left here to look after the property, and he told me he had passed a most dreary time. The Burroughs bay settlement differs from most of the cannery and fishing stations in this part of the territory, inasmuch as it is situated remote from native settlements and a long distance from the regular line of travel between the states and Alaskan ports. Its location at the mouth of Unuk river, the course of which is southerly and flows through high mountains from the interior of Alaska, exposes it to cold winds, which sweep through the gorges. The chilly air from the early winter in the interior is felt here very early in the autumn, and the same effect is noted in the late spring. The watchman who spent last winter here told me that the weather was bitterly cold, high and piercing winds prevailing most of the time. The bay froze over and the strong winds were often accompanied by severe snowstorms, and for most of the winter snow lay to a depth of 4 feet on the level. The watchman was a native of Sweden. He said that for a period of 4 months he did not see a human soul, his loneliness not being relieved even by the presence of a native. I spent here the first 3 days of the month of September, and the air was keen and cold in the morning, with every indication that frost would occur within a few days.

I found along the banks of the Unuk river the most numerous indications of bears met with anywhere in my travels. The river was at this time swarming with salmon, and, spending a Sunday here, I took my natives up the river 3 or 4 miles. The shrubbery on both sides of the river was dense, and every few yards we found places where bears had evidently waded out into the stream and caught salmon. The appearance of the trampled earth and shrubbery showed that they had brought them to the shore, where they had crouched down and eaten them at their leisure, as partly consumed salmon were scattered all around. We found several places where they had left the wet imprint of their feet as they walked over fallen logs, and several times we heard them as they scampered through the underbrush, frightened away at our approach.

Mountain goats are numerous here, and a number were seen on the sides of high and precipitous mountains.

BEHM CANAL.

It may here be remarked that Behm canal is a body of water which surrounds three sides of Revilla Gigedo island. It forms almost a complete loop from where it passes out of Dixon entrance, on the east side of the island, to where it again enters the main body of water in Clarence strait, on the west side. The length of this channel is about 135 miles, and for nearly the whole distance its width does not average over 2 miles. The mountains on either side rise abruptly and generally reach a height of about 2,000 feet, while their sides are covered with a thick growth of spruce and hemlock timber. The depth of the water is sufficient to admit of the free passage of the largest vessels afloat. Camping places along this whole distance were scarce, and I had greater difficulty in finding places to pass the night than anywhere else during the whole time of my journey. The tides appear to be very strong in places, and nearly opposite Yess bay we encountered severe tide-rips, which for a time made our sailing a period of much anxiety.

STEWART RIVER.

20 miles southeast of Burroughs bay we came to another stream, the Stewart river. A half dozen white men and about 20 natives were fishing here for the Burroughs bay cannery. This river, like the Unuk, flows in a southerly direction, the waters coming from the interior of British Columbia. Where it empties into the Behm canal the river is one-half or three-quarters of a mile wide. I had occasion to go up this river 6 or 8 miles in search of some natives who were said to be camping there, and found a very swift flowing stream, in places 20 or 30 rods wide. As the time of my visit was during the dry season, the water was very low, and in places we had occasionally to haul our canoe over shallow places into deeper water. The mountains on both sides of the river are very high, some of them extending above the timber line, and here and there the remains of a glacier were seen upon the tops of the highest. There are no native settlements along this stream, at least in Alaskan territory, and I am told the people of the neighborhood seldom venture up it to any considerable distance. This river is sometimes made the route of miners on their way to the interior, and it is said that good placer prospects have been found about 70 miles above its mouth.

About 10 miles south of Stewart river I found a cascade pouring down the side of the mountain, one of the largest I have seen in Alaska. It is almost completely hidden from sight by the thick growth of timber which grows along the sides, and falls into the canal from a height of at least 300 feet, averaging in width about 35 feet. As it plunges into the water below the sound is deafening, and a cloud of spray rises to a height of 12 or 15 feet. I ascended the sides of the cascade for a distance of 200 feet, and as I looked up saw it tumbling from an almost perpendicular height far above me. After again getting into my canoe I paddled out into the canal until I could discern a depression between the mountains, indicating the existence of a large lake, which supplied the water of the cascade.

15 miles south of the falls, on the opposite or west side of the canal, stands a rock named by Vancouver the New Eddystone. It rises out of the water to a height of at least 100 feet, and is about 50 feet wide at its base,

keeping this width nearly to the top. Its sides are covered with creeping vines. It is a curious and conspicuous landmark, and can be seen for a distance of 20 miles from either direction on the canal. It stands alone, and there is ample space between it and the west shore to admit of the passage of vessels, the water being so deep at its sides that it can be approached by a large ship to within a few feet. Along the east side of the canal there is more or less red and yellow cedar scattered among the hemlock and spruce.

I consider the route from Loring to where the canal joins Dixon entrance, on the opposite side of the island, one of the pleasantest of the many intricate waterways in southeastern Alaska. The mountains rise, some of them to a considerable height, on either side of the canal, and in many cases the distance across is so short that small objects can easily be distinguished from one side to the other. Every few miles narrow bays extend into the mainland, furnishing retreats from rough weather which sometimes prevails in the canal. It is seldom that white men visit this portion of the territory, for Burroughs bay settlement is the only one on the east side of the island. When the Alaska steamers visit that settlement they usually go there from Loring and return over the same route. (a)

SEATON BAY.

Nearly opposite New Eddystone rock, on the east side of the canal, is Seaton bay. It is about 2 miles wide, and extends into the mainland a distance of 15 miles. In places its width narrows down to half a mile. It extends northeast and southwest, and at its head is a fine large salmon stream, where a few families of the Cape Fox or Tongass tribe spend part of the season catching salmon for their own use. I found some timber along the banks of this bay, among which was red and yellow cedar.

BOCA DE QUADRA INLET.

This narrow body of water, called by many whites Bokay inlet, opens into the strait about 5 miles from where Behm canal leaves Dixon entrance. It is a most remarkable and beautiful sheet of water, extending into the mainland from 15 to 18 miles, its width averaging about the same as Seaton bay. Its direction is the same, and at times it looks as if it must connect with that body of water, for the mountains along its north shore seem from a distance to break away in that direction, but upon nearer approach the inlet is seen to follow the other side of the mountain and to wind away gracefully in another direction.

When we neared the head of the inlet my natives called my attention to a large flat rock jutting out into the water, which they told me was once occupied by a tribe of natives during some local war. It covered a space of perhaps 200 square feet, and its position is such as to afford excellent protection to a besieged party. It evidently had been occupied at some time, for the shrubbery growing upon it was still small, and decayed timbers were scattered around, which looked as if they might have been used long ago for some kind of shelter.

At the head of this inlet a stream of water flows from a lake one-half or three-quarters of a mile wide, and at the time of my visit it swarmed with salmon. A splendid variety of red salmon is found here and caught by natives for the Loring cannery. The distance to Loring is about 60 miles, but as the route is through Tongass narrows, the natives frequently make the trip with a favorable south wind in a little over a day with their canoes laden with salmon. When the wind is not favorable the salmon are taken to some convenient point and there transferred to the steam launch, and by this means transported to the cannery. No difficulty would be experienced by large vessels navigating the waters of this inlet, for they are very deep.

There is no permanent native settlement along the shores of this inlet, but every few miles we find a house or two used by the Indians for temporary quarters during the fishing or hunting season.

KAH SHAKES COVE.

This is a small native settlement on the mainland, about 4 miles north of Cape Fox village and immediately opposite Mary island, the location selected by the government for its lighthouse and customs station. It contains half a dozen houses, which are owned and occupied by the family of the Cape Fox chief, whose name the settlement bears. It is a splendid retreat for small craft from the severe storms which so often sweep Dixon entrance, and it is from this vicinity that the natives usually choose their starting point in crossing to the other side. The channel is not over 10 miles wide, and if the weather be fair at starting they can by diligent paddling reach the opposite shore before a storm becomes violent.

The timber, especially the spruce, in this immediate neighborhood is of excellent quality. A large salmon stream flows into the main body of water at this point, and the shores and rocks in many places are covered with mussels, which form a favorite article of food among the natives.

a Since Mr. Bruce's writing the United States coast survey steamer Patterson has spent a whole season surveying in Behm canal.

CAPE FOX VILLAGE.

The home of the Cape Fox natives is on the mainland immediately east of Duke island, on the opposite side of Dixon entrance. It is located on the shore of a beautiful beach. There are 21 buildings in all, and when the tide is highest the water comes almost to the doors of the houses. The village is so completely sheltered that, however severely the storm may rage on the outside, it is not felt here. The houses are all large and imposing, built of heavy timbers and of the usual height, and have but 1 story. Some have windows and steps approaching the door. They have a neat appearance, and are ranged along the line of the beach. The village was entirely deserted at the time of my visit, and the appearance of the grass and weeds, which had grown to considerable height, made it doubtful whether any one had been there for some weeks.

In front of some of the houses were a number of finely carved totem poles. The burying ground of this tribe is immediately adjoining the village, and the graves were neatly cared for. It is very seldom that the Alaskan natives bury their dead. Where soil can be found deep enough for this purpose it is always wet, and therefore it is the custom to erect for the dead small houses or inclosures set upon poles, and sometimes a picket fence is built around them. It is not unusual for a number of bodies to be buried in one inclosure, and frequently the blankets used in life by a man and the dresses worn by a woman, together with boxes and trunks containing the personal effects of the dead, are placed by their side. At a point of land jutting out into the water just as we turned into the harbor of this village I observed a native grave and beside it a canoe. The grave and canoe were about 20 feet above the water, and my natives told me it was the grave of a medicine man; that it was their practice to bury men of this rank by themselves and at a point overlooking the water.

FORT TONGASS.

The journey from Cape Fox village to Fort Tongass is over a distance of probably 30 miles, and in windy weather it is one of the most dangerous stretches of water through which the natives travel in this part of the territory. It is open to the waters of the Pacific, and even when there is no wind the swell from the ocean is felt, tossing their canoes about like corks. For 20 miles or more there are no places where a canoe can run in, and if one is unlucky enough to be caught in a storm he has to stay out. This means that he must steer a mile or more away from shore, for it is a bleak, barren coast, and as the water recedes the black and jagged surface of reefs are revealed. If one attempts to make a landing in bad weather his canoe is certain to be dashed to pieces and the occupants would not live to reach the shore.

The village of the Tongass tribe of natives is located on Tongass island, at the lower extremity of southeastern Alaska. For a few years immediately following the purchase of Alaska from Russia the place was used as a military post, and for a number of years a deputy collector of customs was stationed here.

The island is, perhaps, 4 miles long by 3 miles wide, and a considerable portion of it is nearly level. The buildings which were occupied by the troops are not so extensive as those at Fort Wrangell, and it never was so important a post. The portion of the island formerly occupied by the military is about half a mile from the native village, and the houses in the latter number 25, resembling in construction those at Cape Fox town. At Fort Tongass a very large collection of carved totem poles can be found.

The natural location of the village is very pleasant. It has a long beach, and is protected from severe weather by a point of land which completely shelters it. Fort Tongass was doubtless at one time of considerable importance as a native rendezvous. Its proximity to Port Simpson, the principal British trading post in this section of the country, which is but 25 miles to the south, naturally gave it prominence, and during the time the troops were here it did a large business with natives. The withdrawal of the military destroyed also the importance of this point as a trade center. If the store had remained it would have had to enter into competition with the Hudson Bay Company, which has an extensive establishment at Port Simpson.

PORTLAND CANAL.

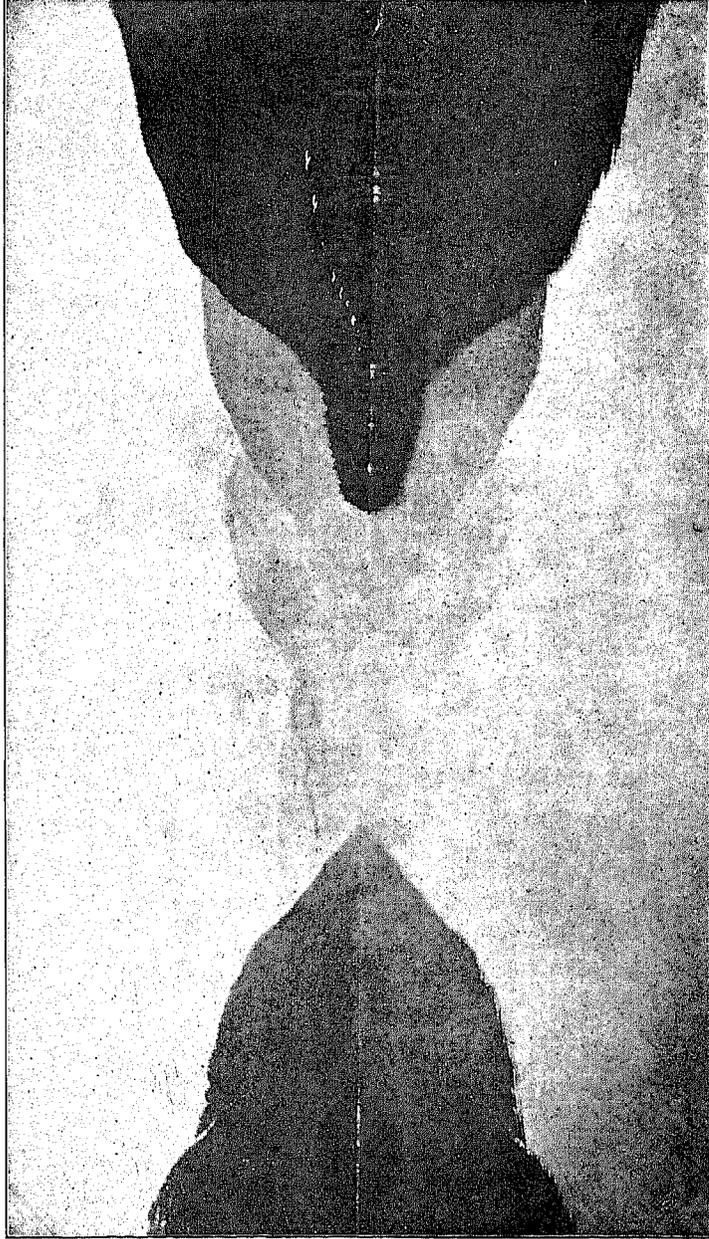
Portland canal, similar in character to Boca de Quadra inlet, but more extensive in width and distance in the interior, opens just below Fort Tongass, but there are no permanent white or native settlements in Alaskan territory along its shores.

TURK'S SALTERY.

The southernmost settlement in southeastern Alaska is about 12 miles southeast of Fort Tongass. It is the home of an old miner, who for many years during the gold excitements of British Columbia followed mining, and at one time was an extensive freighter. He followed the fortunes of Cariboo, Dease lake, and Cassiar, and several times could have taken out of the country enough to have kept him comfortably for life, but like many more of his class he waited until adversity came, and now he is pursuing the uncertain business of salting salmon. He has chosen a delightful location, but the number of salmon caught here is very limited. His pack for the season of 1890 did not exceed 150 barrels, and he has not over \$1,000 invested in the business. There are but half a dozen buildings here altogether, and when the fishing season is over he goes with the natives employed here to Fort Tongass to spend the winter. This settlement is about 20 miles away from the regular route of the Alaska steamers.

Eleventh Census of the United States.
Robert P. Foster, Superintendent.

Alaska.



PORTLAND CANAL.

PORT CHESTER.

Probably the most interesting point in this portion of southeastern Alaska, as well as one of the best known to the outside world, is Port Chester. It is sometimes called "New Metlakahtla", Metlakahtla being the name of the village from which the Tsimpseans moved in British Columbia, about 70 miles southeast of their present location on Annette island. It is especially interesting on account of the history of the natives and their remarkable advancement toward civilization. 3 years ago the spot where now stands Port Chester was a dense forest of spruce and hemlock timber. It is situated on the west side of Annette island, which is comparatively level for 5 or 6 miles in the vicinity of the village. It has the longest beach of any settlement, native or otherwise, in this part of the territory, and the buildings are erected on gradually sloping ground, having a northern exposure. Approaching it from the north one is surprised at seeing so many buildings, and scarcely believes that all the improvements here have been made within the last 3 years and entirely by natives.

When all the Tsimpseans are at home there are about 800 of them. Their language differs from that of the natives of Alaska, it being singularly smooth and pleasing.

The houses of these people stand on the beach for a mile or more, and there are probably 150 or 200 altogether. Most of those first constructed are substantial log houses, but within the past 2 years as many as 75 frame buildings have been built, most of them 2 stories high, and painted.

Under a system inaugurated by Mr. William Duncan the best building portion of the town has been surveyed into lots, which are selected by the natives at a nominal figure, and the amount thus paid goes into a fund which is expended in clearing off the timber, building sidewalks, and grading streets and alleys. In building upon these lots the owners are expected to conform to certain rules of architecture and cost. By means of laying out his town in squares of 4 lots each Mr. Duncan has succeeded in giving each of his householders a corner lot.

At the time of the removal of the Tsimpseans from Metlakahtla they were not permitted to carry away with them any of their personal effects, and they established their homes at their present location under severe privation, and in the face of obstacles that nothing but an abiding faith in a Supreme Power and confidence in the man whose counsel had guided them for many years could have overcome.

Nearly every branch of work is carried on here, and many of the trades have skilled workmen. The great lesson Mr. Duncan has instilled into these natives has been to be industrious and self-sustaining.

Probably the largest and best equipped store building in the whole of southeastern Alaska is at Port Chester. It is a frame building, about 60 feet front by 120 feet deep, and 30 feet high. The building is amply lighted with skylights, and both the store and cannery are roofed with metal. The goods are arranged on either side, and between the counters, which extend the whole length of the building, there is ample room for the free passage of the large numbers who at times congregate here to trade.

The stock includes everything usually found in a country store, and the variety and quality of the goods will probably equal that found in any store of its size elsewhere. The business is in charge of natives entirely. They keep the books and have the general responsibility of everything connected with the business, but make a daily report to Mr. Duncan.

Among the principal industries carried on here is a salmon canning establishment, built and operated for the first time during the season of 1890. It has a capacity of about 8,000 cases, but as this was the first season, only a few hundred cases were packed. It is intended that the natives shall have the full management of the business, so far as the catching of the fish, making of cans and boxes, packing the fish, and everything pertaining to the mechanical part of the work is concerned. No apprehension is felt as to their being able to attend to the business, for at Metlakahtla, their former home, they had a cannery in successful operation, and the product met with a ready market. The cannery plant complete involved an outlay of about \$10,000.

Another of the important manufacturing establishments here is a steam sawmill, which is complete in every particular. Like everything else at Port Chester, natives operate the mill, measure the logs brought here by the natives, saw the timber in any shape or dimension needed, and if there is any defect or breakdown in the machinery, native mechanics are able to immediately repair it and place it in good running order. The mill during the past 2 years has been run almost all the time, getting out lumber for the buildings at Port Chester, and supplying some of the canneries in this part of the territory with boxes for shipping their salmon.

The workmanship upon the houses, both outside and inside, the accuracy with which joints are fitted, the delicate mortising of doors and windows, and the firm and substantial character of all the large buildings, give evidence of the greatest care, and leave no doubt as to the mechanical skill of the Tsimpsean natives who follow the trade of carpenters and joiners.

The Industrial Home building is a large 1-story structure, and the high ceilings and the arrangement of the windows to secure good air show an appreciation of the value of proper ventilation in living apartments. The sleeping apartments are arranged in two wings, which extend in opposite directions from the main room or dining hall. The kitchen and storeroom are in the east wing and the private office and sleeping apartment of Mr. Duncan in the west wing.

The season of 1890 was the first year in which this important work was attempted, and while but a start has been made, enough is now apparent to show that the design is to ultimately make this an important factor in the training of the native youth in the mechanical and industrial arts. The boys taken into this establishment are boarded and lodged here, and kept under the same strict discipline which prevails at like institutions among the whites. They are under the immediate charge of a superintendent, who instructs them in the use of tools and manual labor out of school hours.

A large building is under process of construction about 100 yards east of the boys' home, which will be used as a boarding school for girls. It is inclosed, and it is hoped to have it in running order in another year.

The most imposing structure at Port Chester is the school building, also occupied as the temporary place for holding church services. At present there is no church edifice here, but plans for one are ready, and within another year it is hoped its erection will be commenced. The school building is octagonal in shape, with very high ceilings, and windows on every side. It has a cupola at the cone of the roof, and the high walls are slanted from a point about 30 feet from the floor to the center of the arch. This gives the interior of the building a pleasant appearance. The seating capacity is about 400.

The Tsimpseans as a whole are not natural musicians, but have some musical taste. Immediately in front of the store stands the trunk of an enormous hemlock tree. It has been cut off about 30 feet above the ground and steps have been built to the top, around which a stand has been erected. Upon every pleasant evening during the summer 15 of the natives, who comprise the Port Chester brass band, ascend this stand and discourse sweet music. Their playing is harmonious and their time excellent, and their rendering of national airs, of which they seem to be especially fond, is enough to stir one to patriotic feelings and awaken an admiration for these people, who seem to be able to encompass success in the practice of any art or science toward which their efforts may be directed. Many of these natives are good vocalists, who have entirely given up the chant of the savage, and sing quite melodiously both sacred hymns and popular music. The mouth organ and accordion are as popular among the youngsters as among white children, and a number of them are proficient on the violin.

2 of the natives are photographers, having sufficiently mastered the art to produce excellent likenesses and landscape views, and in many of the houses may be seen pencil sketches and paintings of scenes in the vicinity of Port Chester which are readily recognized.

In the center of the village, upon a tower 30 feet high, swings an enormous bell, which is rung on every public occasion, and on Sunday, as its powerful tones are heard, the natives are seen coming from every direction and wending their way toward the place of worship. I chanced to spend one Sunday at Port Chester, and took occasion to arrive at church early, and seated myself where I had a good view of the whole interior. There were but 4 other white persons present. When the hour arrived for the service to begin every seat was filled. The natives were all neatly and well dressed, and as they took their seats most of them bent their heads in silent devotion. A native boy of not over 16 years of age played a voluntary upon the organ, at the close of which Mr. Duncan entered the room from the rear and took his seat in the pulpit. He was dressed in a black frock coat, and as he rose to read the opening hymn his white hair gave him a most venerable appearance. As I watched the congregation, all well behaved and evidently impressed with the thought that they were within sacred precincts, I could not help but think of the wonderful transformation which had taken place among these people. Mr. Duncan is a man 56 years of age, 5 feet 6 inches tall, and weighs 150 pounds. Although his hair is as white as snow, his face is free from lines of care, and he is the very picture of robust health.

Immediately after the reading of the opening hymn, which was read and sung in English, he announced the text in Tsimpsean, and for an hour preached in that language. All the rest of the service, including the singing, was also in the native tongue. There was the closest attention paid by his congregation, and at times the minister seemed to grow eloquent. Although his utterances were unintelligible to me, it was apparent that the natives understood every word that was spoken. After witnessing these services I could understand why the Tsimpseans are a devout people and attend church with strict regularity. 34 years of earnest devotion to these natives by this remarkable man has inspired them with religious sentiments to which they cling with undying constancy.

The advancement made by the Tsimpseans toward civilization is acknowledged by the whites throughout this territory. The natives belonging to other tribes think nothing of making a journey of several hundred miles in their canoes, and many of them often visit Port Chester. They look upon the Tsimpseans as a sort of superior people, whose ways and example many of them seek to emulate.

Before moving his people to their present home, Mr. Duncan visited Washington for the purpose of learning what privileges could be secured in Alaska. A number of prominent people were interested in his work, and he was encouraged to bring his followers into the United States territory, though no official action was taken. On the last day of the Fifty-first Congress a law was passed setting aside Annette island for the sole use and benefit of the Tsimpseans.

Mr. Duncan's first act among the people was to thoroughly master their language, thus to be better able to instruct them in the ways of civilization. For years he lived among them, adapting himself to their mode of life. He early taught them to avoid white men who sought to live with them, and religiously impressed upon them that

such intermingling was not for their good. While the whites who visited this tribe were never ill-treated, they were given to understand that he would tolerate no hanging around. As a result of his caution in this matter the only white man living with a native wife here is an old Frenchman, who has been with them for a great many years.

Notwithstanding the fact that many of his people work at the different canneries during the fishing season and in the mines in the northern part of the district, as soon as the season's work is over they return with pleasure to their homes at Port Chester, and expend the summer's earnings in building and providing for the future. It is a fact, often commented upon by the whites, that when Sunday comes the Tsimpseans lay aside their garments of toil and don those of the sanctuary. On the Sunday which I spent at Burroughs bay the Tsimpseans employed there held religious services, one of their number preaching, while the natives belonging to other tribes spent the day in labor.

The Tsimpseans differ from all the other tribes in southeastern Alaska, unless perhaps the Haida can be excepted, in their total abstinence from the use of liquor, and the manufacture of the vile hoochinoo is unknown among them.

RED BAY SALTERY.

This fishing station is located on the northeastern end of Prince of Wales island, and for several years has been used for the salting of salmon. There are half a dozen log and frame buildings here, in which at the time of my visit were stored tools and material for making barrels. The saltery was not operated during the season of 1890. It is understood that some of the members of the Loring Cannery Company are interested in this location, and that some time in the near future it is proposed to make this place a tributary to a cannery to be built either at Salmon or Lake bay, farther down the east coast of the island. There were no natives or whites here at the time of my visit, but the size of the stream and the general appearance of the improvements indicated the importance of this location, and that it will be a prominent factor in the supply of salmon for the new cannery.

SALMON BAY.

This location is about 20 miles south of Red bay, and is one of the most important salmon stations in this part of southeastern Alaska. It is used for salting salmon, which are caught in vast numbers from a beautiful stream which flows from a large lake lying between the mountains. Several thousand dollars are invested here in buildings, boats, and fishing tackle, and about 50 natives and half a dozen white men are employed here during the fishing season. Over 1,500 barrels of salmon were packed here during the season of 1890, and the stream is regarded as promising a permanent supply of these fish. There are about 25 buildings here, including the native houses, and it presents an interesting settlement.

At the close of the fishing season the settlement is abandoned by whites and natives. A good stock of general merchandise is kept in store, but little business is done here besides that incident to supplying the employes.

LAKE BAY.

This fishing station is thought by some to be the best and most prolific of any on Prince of Wales island. It is located some 2 miles inland from the main body of water, and the stream pours out from the mountain lake about 1 mile above the settlement. It furnishes a large number of salmon for the cannery at Loring, and when they can not be shipped to that place immediately after being caught they are salted here and packed in barrels. Here, as elsewhere at all the different salteries in this section, the lumber used for barrels is made from timber found in the immediate vicinity.

The steam launch from the Loring cannery makes regular trips between that place and this station for the transferring of salmon. Several hundred barrels of salted salmon were packed here during the season of 1890.

The cooper shop is located about a mile from the saltery, and at the point where the cannery will probably be located if built at this place. It is at this point that the launch stops to receive the salmon taken to Loring. Between here and the saltery there is a deep and narrow passage of 1 or 2 miles, through which it is only safe to pass when the tide is full. During the ebb or flow of the tide the water rushes through this passage with the force of a torrent, and only a year ago 3 natives were drowned while attempting to pass through in a large boat. It is one of the most dreaded and dangerous water courses found in this portion of the territory.

There is a settlement here usually of about 50 natives and half a dozen white men during the fishing season, but it is wholly abandoned in the winter months. There is a small store well stocked with general merchandise and the business is under the management of Mr. Bell, who showed me some fine red cedar timber in this vicinity, and says there is a considerable body of it.

TOLSTOI BAY.

From Lake bay to Tolstoi, located on the east side of Prince of Wales island, the distance is about 30 miles. It is the most southern station on this island where fish are obtained for the Loring cannery. A large saltery is located here, but during the season of 1890 only a few barrels of fish were salted, as they were able to ship most of those caught in fresh condition to the cannery. It is a natural salmon location, well sheltered from the outside, and will prove a valuable auxiliary to the new cannery should it be desirable to include this among the supply stations. It is but 35 miles across to Loring, and it may be deemed best to reserve Tolstoi as an adjunct to the Loring cannery, which at present depends upon it for a large supply of salmon. A crew of half a dozen white men is kept here during the fishing season. This is quite a resort for halibut, and splendid specimens can be caught almost any time by throwing a hook and line into the water from the saltery.

From this place to Karta bay settlement there is a trail over the mountains, which shortens the distance between the two points to about 12 miles, while as many as 40 miles must be traveled if the journey is made by water.

KARTA BAY SALTERY.

Some 6 years ago Karta bay, on the east side of Prince of Wales island, the site of the first salmon saltery in Alaska, became noted as the place where the collector of customs for the district of Puget sound captured a large quantity of opium. Having heard that a large lot of this drug had been sent here from British Columbia, which it was intended at the first opportunity to ship to the states, he succeeded in reaching this place ahead of the parties who owned the opium, and found it secreted in the salmon house packed in barrels. The amount found was estimated to be worth about \$50,000.

The place consists of half a dozen log and frame buildings, but during the season of 1890 all the salmon caught here were taken by the natives to the Loring cannery.

The stream has every indication of affording large numbers of fish, and the natives, of whom I found about 25 at the time of my visit, told me there was never known to be a failure in the run. The parties interested in this location deem it of enough importance to keep on hand a small stock of goods and 2 white men to look after their property.

KASSAN.

This is a native settlement at the southern end of Karta bay, and about 10 miles from Karta bay saltery. It is one of the villages of the Haida tribe, and at one time was an important place. It now contains about a dozen native houses, mostly built of logs, and some of them large and substantial. When the natives who regard this as their permanent residence are at home, they number probably not to exceed 75.

Some fine totems have been erected here, and some of the houses contain a number of rare curios in the shape of elaborately carved wooden masks, headpieces, and implements of war, among the latter being old flint lock muskets of Russian and English make and a number of old blunderbusses. A few antiquated pieces of tableware bearing a Russian stamp were scattered around, and if all the boxes and chests piled up in these houses contained as many relics as the few I saw opened, this would be a good field for the relic hunter to swoop down upon.

Among the natives here I found an extraordinary character, a man perhaps 70 years of age, of powerful physique and voice, and totally blind. He was known as Paul Jones, and spoke exceedingly good English. One of my natives told me that he was known as the native whose eyes had been put out by whites many years ago, but he denied this, and said his blindness was the result of disease. He took a great deal of pleasure in telling me of things that took place before he became blind, and of his association with whites during the early settlement of the country. Some of the incidents he related sounded very much like the experiences of the famous man whose name he bears. He had evidently been a character of some note during his younger days, and the respectful consideration paid him by the natives showed that he was still a man of influence among them.

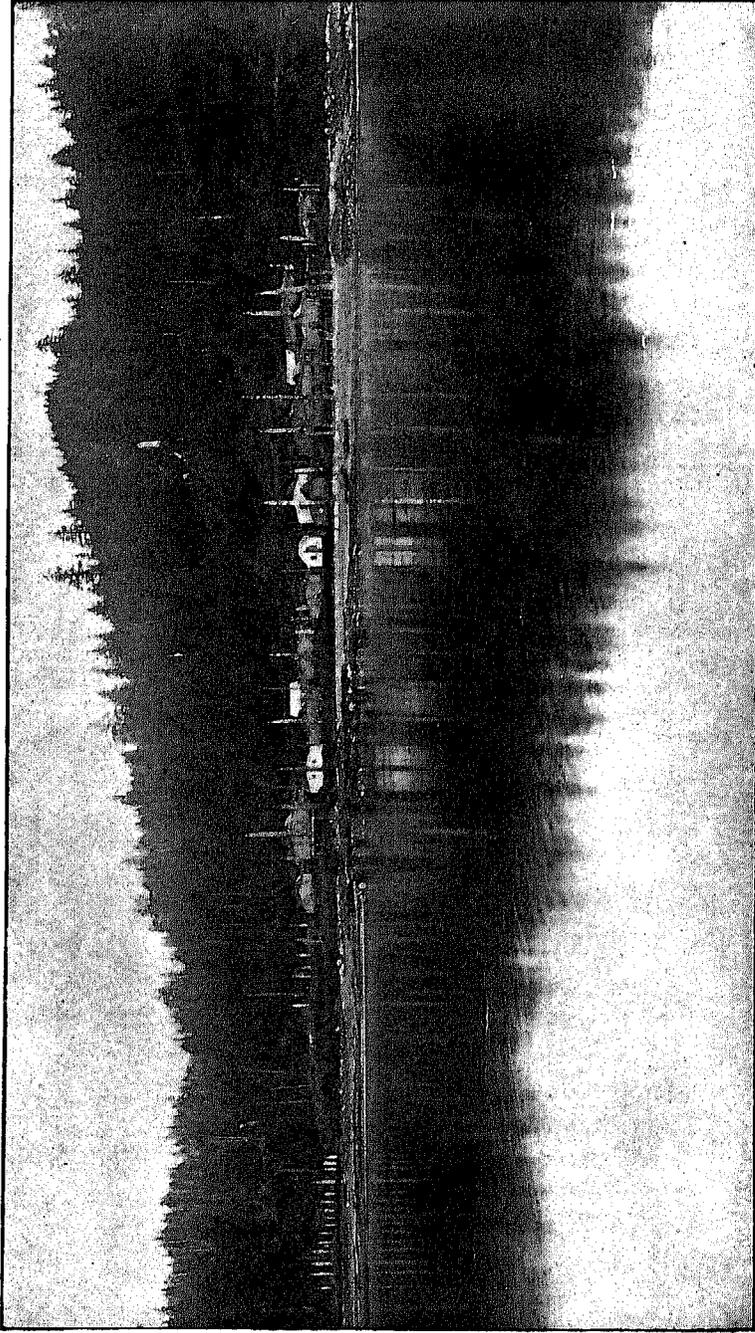
About half a mile across the bay from the village is a large stream which at the time of my visit was swarming with salmon. A large canoe filled with these fish left for Loring the morning after my arrival, and from information obtained from the natives I became assured that this was an important and valuable salmon location.

NICHOLS BAY SALTERY.

Within a few miles of the southern extremity of Prince of Wales island is a bay known as Nichols bay. It is perhaps 2.5 miles long by half a mile wide. It is a location selected by a firm which, for a number of years, carried on a salmon saltery at Burroughs bay. At the time of my visit the fishing season had not commenced. There are the usual buildings necessary for carrying on the salmon salting business. On the same bay, but a mile nearer Dixon entrance, is located a native summer village. The natives I found here were stopping only temporarily.

Eleventh Census of the United States.
Robert F. Porter, Superintendent.

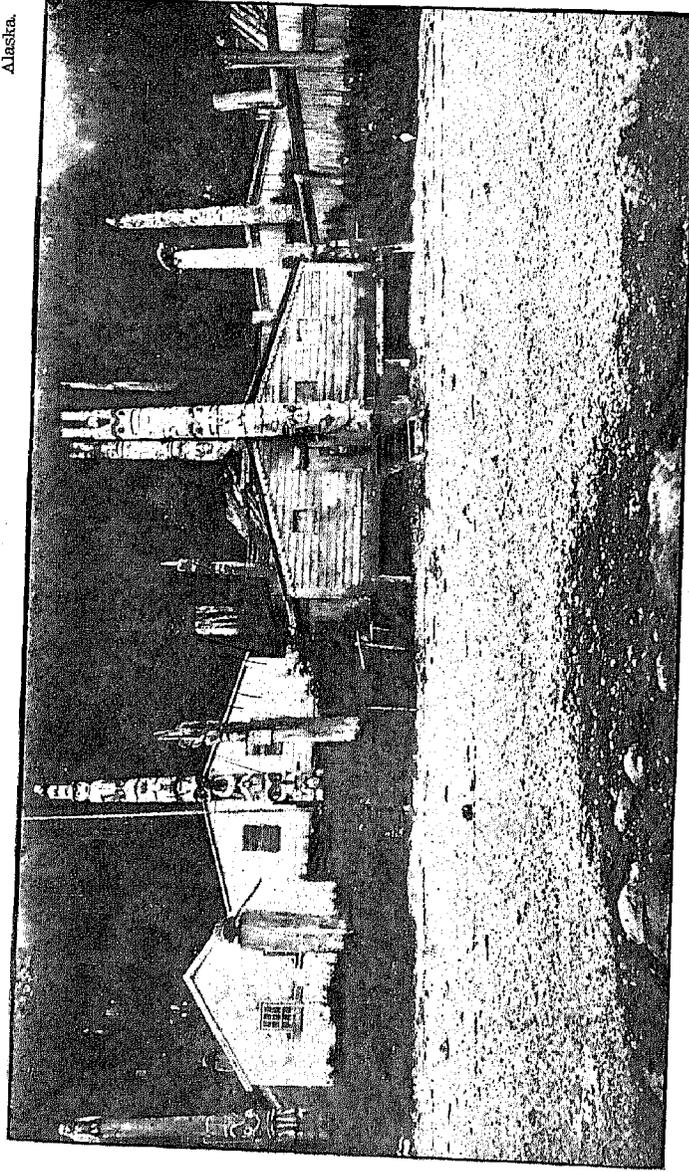
Alaska.



KASSAN VILLAGE

Eleventh Census of the United States.
Robert P. Porter, Superintendent.

Alaska.



Haida Totem Poles, Kasaan.

TAKU.

This place is another location made by the same firm, about 30 miles around the lower end of Prince of Wales island, and a branch salmon saltery was established here at the same time as that at Nichols bay, and with about the same character of improvements. The saltery is located at the head of a small cove branching off from Cordova bay. A large stream comes in from the mountains and has every natural advantage necessary to make it a prolific one. I was later informed that the season's catch had proven all that had been anticipated, both here and at Nichols bay. This company has a steam launch, which is designed to run between the two stations and assist the natives in the transporting of fish to the salteries.

KLINQUAN.

Within 2 miles of the Taku saltery is located a small Haida village known as Klinquan, which, like Kassan, was probably at one time a place of some note among the natives. There are about a dozen native houses here similar to those found at other native villages, and there are some very interesting totems. This village is seldom visited by natives now, and it is doubtful if over a dozen families are ever here at one time.

HOWKAN.

Howkan (Jackson post office) is situated upon the west side of Long island [which lies between the south end of Prince Edwards island and Dall island], and next to Port Chester is the most important native village in this part of the territory. The Haida as a tribe are considered by many whites as equal to the Tsimpsians in point of intelligence, morals, and general character. Physically they are perhaps the best formed of any of the Alaskan natives, many of them being of large frame and powerful build. They are good looking as a class, and some of the women are very pretty.

Rev. J. Loomis Gould, the Presbyterian missionary at this place, has been unremitting in his efforts with these people for the past 9 years, and has been ably seconded in his work by his wife, a woman of charming character, who possesses many of the charitable and philanthropic traits which have distinguished her sister, Mrs. McFarland, so long stationed at Fort Wrangell, but now in charge of the children's home here.

There are but 2 white men living at the mission besides the missionary, one the superintendent of the sawmill and the other the storekeeper. This village is about 175 miles distant from Fort Wrangell by the usual route, and probably its remoteness from white settlements has aided in the success of the missionary work among these people.

The public school here, supported by the general government, is presided over by a sister of Mr. Gould, and her work among the native children has been marked by excellent results.

The children's home, in charge of Mrs. McFarland, and supported by the Presbyterian Board of Home Missions, is occupying temporary quarters, the pretty buildings built for that purpose having been destroyed by fire a year ago. Mrs. McFarland and the society have at this place suffered their second loss by this means, the home at Fort Wrangell having been entirely destroyed by fire a few years ago. In both instances Mrs. McFarland lost nearly all her personal property. Howkan has a post office called Jackson, and receives mail from Fort Wrangell once a month. The regular Alaska steamers make visits to this place only twice a year, once in the autumn and once in the spring, and remain only long enough to discharge their freight.

The village of Howkan contains about 40 houses, among them a number of neat and pretty cottages occupied by natives. At the time of my visit most of the people were away for the summer, fishing and working at different canneries. There is an elaborate display of totems here, the carvings upon them being of the best workmanship. From my observations I am led to believe that the Haida rank second at least among all the other tribes in the practice of industrial pursuits, many of them displaying rare mechanical skill. (a)

There is a general store here, which carries a stock of several thousand dollars and does a large business. Besides dealing with the resident Haida, many of those living on the Queen Charlotte islands do more or less trading here, bringing their furs, which they exchange for goods.

About 20 miles south of Howkan is a place sometimes occupied by the natives, called Kaigani. It is at the southern point of Dall island, which lies on the opposite side of Howkan strait, a body of water a mile or so wide separating this island from Long island. Between Kaigani and the Queen Charlotte islands the Haida hunt sea otter, this channel being a resort for this most valuable of fur-bearing animals, though they are not very numerous. These waters are also in the pathway of the fur seal on its journey to the breeding grounds in Bering sea, and many valuable pelts are secured by the natives.

About 3 miles south of Howkan, on the opposite side of the strait, is located a sawmill which is run by water power. For the past 5 years it has been made to furnish lumber for the mission and also for the natives. None of the lumber cut here has been sold to the white settlers or sent away from this immediate vicinity. The mill is run by natives with the help of the superintendent, a part of whose duties it is to instruct them in the use of tools and in the various branches of labor.

a In carvings the Haida are conceded to rank first both in design and execution.

The general appearance of the country on Prince of Wales island, near Howkan, is similar to that of other portions of the island. The surface is covered with the usual kinds of timber found in other parts, and of a similar quality.

At the time of my visit to this place the weather was so bad that I had to remain here 4 days. The next day after my arrival the steam launch from Taku arrived, bringing Mr. Miller and his wife and daughter. An idea of the remoteness of Jackson from other settlements, and the rare visits made by strangers, is best understood when I state that Mrs. Gould told me this was the first time during her residence of 9 years that she had had the pleasure of entertaining a white woman.

KLAWAK, OR TLEWAK.

This is the most important settlement on Prince of Wales island, being the principal village of the Hanega tribe of Thlingit, and when all are at home they number about 300. It is one of the oldest stations in southeastern Alaska and the first salmon saltery established on this island by California capitalists. The buildings belonging to the company are all of the most substantial character, and everything connected with this establishment shows the business-like methods employed and the close attention paid to the smallest detail.

There are about 60 buildings in this settlement, and during the fishing season it has the appearance of being a thriving village. It is on the line of the mail route between Fort Wrangell and Jackson, and has a post office, Klawak mail being received here once a month. It is not on the regular route of the Alaskan steamers, and the goods handled by this company are brought here in the spring and the season's pack of salmon shipped to San Francisco in the fall by their own vessel.

The capacity of the cannery is about 15,000 cases, and 2 steam launches visit a number of stations and bring salmon here whenever it is feared the streams in the immediate vicinity may not yield a sufficient supply.

The Klawak Cannery Company is under the direct charge of a superintendent, and he has solved the problem of native help in the salmon packing business. The fish are caught almost entirely by the natives; they constitute the principal help employed on the launches, and, aside from a dozen white men employed, native men, women, and children do the entire work. They cut the tins, make the cans, clean the fish and pack them, make the boxes for packing the cans when ready for shipment, and among the first things taught is the free use of water, so essential to this business. The fact that the cannery at this place is carried on almost entirely by native labor makes it one of the most interesting institutions of its kind in the whole of southeastern Alaska, for in all the other canneries the work is done by Chinese, while here not a Mongolian is employed. When ready for market the product of this cannery enters into successful competition with all others and finds a ready sale.

Klawak has a well equipped store and does a large business. Deer and hair-seal skins are brought here by the natives in large numbers, and many of the different kinds of furs found in the vicinity make their way to this market.

Immediately adjoining the cannery is a large steam sawmill, with a sawing capacity of 15,000 feet per day. It is used only for making lumber for the use of the cannery and to supply the natives with building material. All the box lumber is made on the spot, while boxes used by other canneries are shipped from Puget sound in "shucks" and nailed together when wanted. This sawmill was erected some years ago, when it was supposed that lumber could be shipped from the territory, and at one time extensive preparations were made for sawing lumber for the San Francisco market. But almost the first shipment made was seized by the government, and after years of litigation the company compromised the case, and the work of the mill thereafter was confined to local wants.

For 2 years a government school was in operation here, but 3 years ago the teacher died, and until the spring of 1890 the vacancy was not filled. At the time of my visit, however, the school had been started anew, and there was every prospect that the neat 2-story schoolhouse, which was also made to serve as the residence of the teacher, would be filled with native children.

Among the 50 native houses here some are neat and substantial. They are arranged around the beach in a semicircle in the rear of the company's buildings, and the natives can launch their canoes from their very doors and paddle away on their journeys.

I arrived at Klawak on the 24th of May, and as I was obliged to travel completely around Prince of Wales island, concluded to make this my starting point. On account of the location of the settlements on the west side of the island I had to go to the extreme southern point and back to Klawak. On this journey I was absent until the 2d of July, and at every village visited my natives were questioned about the proposed "potlatch" which was to be given at Klawak by the chief Tekike of the Hanega tribe on the 4th of July. This is an antiquated custom, still to some extent observed among the Alaskan tribes, in which a chief and perhaps other members of a tribe distribute presents during a season of feasting and merrymaking, which often lasts several days.

In the present instance Tekike had sent invitations to the Haida to join in the celebration, and everywhere we went I found the natives all anxious to be present. Those who constituted my party were willing to work extra hours and undergo the inconvenience of traveling in bad weather if they could only get back to participate in the festivities. In view of an opportunity of witnessing an unusual event and a chance to enumerate some who might

otherwise escape me, I concluded to hurry my work that I might be at Klawak on the anniversary of the nation's independence.

On my return I found one portion of the village occupied by Haida and the other by Hanega. Everything was bustle and excitement. The clerks at the store were taxed to their utmost to wait upon the natives, who brought in their furs and dug out from their pockets many a silver and gold piece, for the purchase of some article of clothing, blankets, or groceries, which were to be distributed among their friends as an evidence of good will and friendship.

The chief interest, however, centered in Tekike. It was understood that he proposed to make this the most important event of the kind that had taken place among the natives for years, and his house was filled with all manner of goods, with which he expected to purchase the esteem of the natives and secure himself renewed recognition as the chief of the Hanega tribe. Tekike is a man about 60 years of age, the possessor of the largest and best canoes at Klawak, and claims 2 or 3 of the best fishing streams in this vicinity.

On the morning of the 4th a procession was formed from the Hanega quarters, which marched to Tekike's house, and it was immediately followed by one composed of the Haida. Many of the houses were ornamented with flags flying from the roofs, and the company's buildings were gayly decorated. The natives were dressed in odd garments, some of them gorgeous in gilt and buttons and others ludicrously grotesque. Many of them had their faces partly painted in red and black, and on the heads of some were elaborately carved crowns and headpieces made of wood and inlaid with shells. Feathers were braided in their hair and eagle down was mixed among the loose locks of the women, which gave them the appearance of having slept in a feather bed the night before. What the significance of the feathers may be among the Alaskan natives I do not know, but they play a conspicuous part in every celebration, and among the dancers it is the practice to fill the space above the headpiece with small feathers and down, which fly about them as they jump around.

When they were all in the large room of the chief's house it was filled to suffocation, and peering into the doors and windows were the faces of many others anxious to witness the ceremonies. There must have been over 400 natives present. The exercises opened with a song, which, while it did not possess very great range of note, was rendered in very good time and harmony. The children all joined in and the sight was an interesting one. At one end of the room were 2 native women with rich Chilkat blankets (an article much prized by the natives, and woven from the wool of the mountain sheep) thrown about their shoulders. They stood together and gracefully swung their bodies from side to side, keeping time to the music. The perspiration poured down their faces like water, but apparently unconscious of the heat they kept up this swinging motion for half an hour or more. At times they seemed moved by some new power, or perhaps the words of the song sunk deeply into their hearts, for they would swing with quicker motion, and every eye seemed riveted upon them.

When the music finally ceased a male member of the Hanega tribe stood up and delivered himself of a brief exhortation, to which responses were occasionally made by the crowd, and as the speaker waxed eloquent the excitement was intense. At the conclusion of the oration singing was again renewed, and the 2 women again started in on their swinging, lateral motion. After a while the chief Tekike took the floor and proceeded to deliver what seemed to be a welcoming address, and at times during its delivery half a dozen men would talk at the same time, probably telling of the glorious achievements of their chief. When the chief seemed to arrive at the closing point of his address half a dozen natives crowded their way into the room loaded down with blankets, bolts of sheeting, and calico, which they commenced to unwind and heap in endless confusion around their chief, until he was completely buried from sight under hundreds of yards of many colored cloths. During this ceremony some would exhort, a song would be sung, and again and again the bolts of calico and sheeting were unwound and heaped upon Tekike. What this ceremony meant I do not know, but when the chief finally thrust out his head, decorated with head gear and face painted, he looked more like some wild animal buried under this mass of dry goods than a human being. After what seemed to be hundreds of dollars' worth of goods had been thrown about him, Tekike freed his arms, and, tearing off piece after piece, called out the names of those for whom he intended each gift. A number of men and women were kept busy distributing the goods. Blankets were given away single and double, and valuable ones were cut in strips and the small fragments passed among the people present. The recipients seemed as much pleased with a small strip as they would have been with a whole blanket. There were those who seemed to be special objects of regard by the chief, and these persons were sometimes buried under the many gifts heaped upon them. These exercises were continued for some hours amid singing and the pounding upon boxes, which served as drums. After a time the crowd separated to gather again in the evening, when the same performance was repeated. The programme was varied somewhat at times, 1 or 2 men taking the place occupied by the dancing women during the day. These men were dressed in fantastic shape and their hair powdered with down and the feathers of birds. One of them would start in with some sort of an exhortation, and as he proceeded the crowd would shout responses, when all of a sudden a song would be started and the 400 voices would join in the chorus. Meanwhile the figures would jump and kneel, swaying and bending their bodies in all kinds of positions, their heads thrown backward and forward, and when their faces became livid with excitement their eyes would roll in their heads, and gradually they yielded to the exertion amid a shower of feathers. As fast as one became worn out another took his place, and this

performance was kept up for hours amid the anxious gaze of the audience, who seemed carried away with excitement, which grew so intense at times that it was painful to witness. For 4 days and nights these festivities were continued, sometimes in the house of the chief, at others in that of some member of the tribe, and occasionally they would all congregate in the quarters occupied by the Haida.

An interesting ceremony took place on the afternoon of the third day. As many as 20 canoes were launched, some of them containing 30 or 40 persons. With flags flying and ribbons streaming they floated out into the bay, an inspiring sight, under the glare of a bright sun, the men quietly dipping their paddles, while every voice joined in a funeral dirge. They were going to the burying ground about a mile away to erect a totem pole over the grave of a child of the chief who had died some months before. At the grave the ceremonies consisted simply of raising the pole. It was nicely carved, and I was told it cost \$100. After the pole was raised they returned to the village, and in a few hours the potlatch, with all its accompanying excitement, was renewed. During the whole of the 4 days' celebration not an angry word was heard nor an intoxicated person seen.

After witnessing the bestowal of several hundred dollars' worth of goods by Tekike upon these people, in which were packages of ulikan oil, pressed seaweed, dried salmon and halibut, hats, women's dresses, clocks, knives and forks, and every imaginable article of clothing, dry goods, and groceries, I asked the manager if there was no end to the resources of Tekike. He replied: "Oh, yes; when this thing is over he will probably come to me for credit to buy something to eat." Sure enough, the very next day he came into the store with a deer pelt and a hair-seal skin, the combined value of which was but 65 cents, and exchanged them for some sugar and tea.

CHICAN.

About 60 miles north of Klawak, on the west side of Prince of Wales island, is a small settlement called Chican. It contains a sawmill and about a dozen houses. The mill was built some 10 years ago and has a sawing capacity of about 8,000 feet per day. It is run by water power, which has been brought at great expense several hundred feet from the side of a mountain through a flume resting upon an extensive trestlework.

About the time the Klawak company shipped some lumber to San Francisco the owner of this mill made a shipment which was seized by the government, since which time its business has been confined to trade within the territory. It has 2 schooners, which transport lumber to Juneau, Fort Wrangell, and the cannery settlements. Considerable yellow cedar is found in this vicinity, and samples of the wood have been worked up into many articles which set off the value of this timber to good advantage.

The manager lives here throughout the year and has his family with him. His house is filled with many comforts, and notwithstanding the loneliness of the surroundings, all seem to be contented. He is something of a shipbuilder, and has a fine steam launch of his own design. Another man, also an old shipbuilder, had at the time of my visit the hull of a good-sized schooner nearly completed.

Chican is connected by mail with Fort Wrangell and Howkan, but, like Klawak, it is not on the line of the regular Alaskan steamers. Natives on their way to and from the various settlements frequently pass here, and more or less trading is done in the store at this place. The surface of the country about is very rugged.

KICHIKAN.

This settlement is located in Tongass narrows, about midway between Port Chester and Loring. It was the seat of a salmon cannery, having a capacity of about 12,000 cases, but in the spring of 1889 the buildings were destroyed by fire and they have not been rebuilt.

A store is still maintained by the company, and there are a few native houses, but only half a dozen families reside here permanently since the burning of the cannery.

Kichikan is on the line of the Alaskan steamers, which stop here only if they have freight to deliver or furs to take on, these constituting the only article of shipment now.

The natural location of this place seems to be good for trade, as it is on the direct route between the lower portion of the territory and Juneau and Sitka. It has a remarkable salmon stream, which comes into the narrows just to the south of the village, and during the running season the fish ascend the stream in vast numbers.

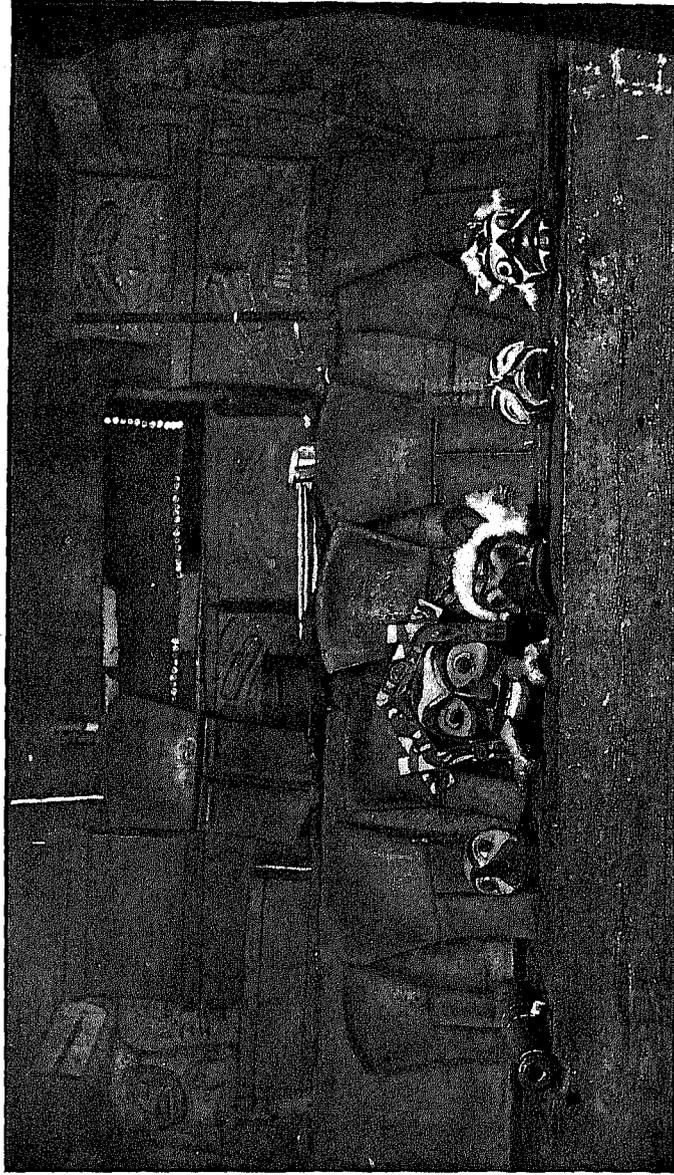
I found here quite an extensive garden, in which potatoes and various varieties of root crops were successfully grown during the season of 1890. The manager told me that as a result of his experiments during the last 2 years he felt convinced he could raise all sorts of root crops profitably at this place.

WARDS COVE.

About 3 miles north of Kichikan is situated a salmon saltery known as Wards cove. It takes its name from an inlet which opens into Tongass narrows through a very narrow entrance, not over 25 yards in width. Inside there is a beautiful little sheet of water, perhaps half a mile wide, and so completely sheltered by high mountains that however rough and stormy it may be in the straits nothing is felt of it here. A German was engaged in making barrels here during the season of 1890, and put up a few barrels of salmon as an experiment with a view to a future enlargement of the business.

Eleventh Census of the United States.
Robert P. Porter, Superintendent.

Alaska.



HAIDA TREASURES.

POINT BARRIE.

On the most southern point of Kupreanoff island is a salmon saltery designated as the Point Barrie settlement. It is owned by Wrangell parties, and was established 2 years ago. They have a store here, in which is kept a fair assortment of goods, and their saltery buildings are large enough to carry on an extensive business. A large stream flows into the bay about half a mile from the saltery, and during low tide there is shallow water for half a mile from its mouth. The hauling grounds are very good and comparatively free from rock.

Half a mile from the saltery there are 15 native houses, all of them temporary quarters, being occupied only during the fishing season or when the natives are in this vicinity on a hunting excursion. This is a great resort for deer, and many are killed here every winter. There is considerable level country in this vicinity, and I was told that when there is much snow in the mountains the deer come down to this level country for food.

A narrow strip of water separates Kupreanoff from Kuiu (Kuhn) island, joining Clarence strait near Point Barrie. It is called Rocky pass, and during high tide there is depth of water in most places sufficient to float a large ship. It is about 40 miles long, and is the route frequently taken by natives and small sailing vessels in going to Juneau from the southern section of the territory.

KAKE VILLAGE.

At the northern end of Kupreanoff island, situated upon a beautiful beach, is Kake village. It is the home of the tribe of natives known as Kakes, who have the reputation of being the most vicious of all the southeastern Alaska tribes. They are, without doubt, the most backward in embracing civilized habits, but during the 4 weeks in which I traveled all through their country I saw nothing which would justify the reputation they seem to bear. On the contrary, in a number of instances I saw that they were not only anxious to become civilized, but said that they would do anything to do away with the manufacturing and drinking of hoochinoo if the government would give them a school at which their children could be educated and have the same opportunities that some of the other tribes have in this respect.

There are about 25 houses at Kake village, and many of them are neat and will compare well with those of other villages I have visited. At the time I was there the place was entirely deserted. There are a number of totem poles here, some of them elaborately carved. The burying ground, which immediately joins the village, had the appearance of receiving a good deal of care. Strong and roomy "dead houses" had been erected, and through the openings in the sides I could see about the boxes containing the dead bodies all sorts of articles that probably belonged to the occupants when living. Nearly all of the Kakes belonging to this settlement I found at Point Ellis.

POINT ELLIS.

This is the name given to the cannery settlement which is situated at the head of a bay opening into Chatham strait, about 3 miles from the south point of Kuiu island.

Mr. Calbreath, the manager, is one of the oldest settlers in southeastern Alaska, having been engaged for many years as trader among the natives of British Columbia, and he still has large interests in trading stations up the Stikine river. He owns the only steamer running up that river, and has a pack train which takes goods from the head of navigation into the interior.

The Point Ellis establishment was removed from Fresh Water bay, on Baranof island, about 60 miles from its present location, during the spring of 1890. At the time of my visit to this place the fishing season had just commenced, but I understood afterward that about 10,000 cases were packed.

The cannery is thoroughly equipped with the latest improved machinery, and has a capacity of about 15,000 cases. 35 Chinese and 15 white men are employed here, and at the time of my visit nearly 100 natives were living here.

The store at this place is one of the largest found anywhere in my travels. The steam launch owned by the company might properly be termed a steamer. It is built after the model of large ocean steamers, and is equipped with a superior class of machinery. A crew of 6 men is necessary to man the vessel, which, if necessary, can attain a speed of 14 miles an hour. It is large enough to navigate the roughest seas ever experienced in these inland waters.

RESOURCES.

The natural resources of this portion of Alaska may properly be considered the same as those credited to the district farther north, namely, timber, fish, and mineral.

TIMBER.

The different varieties of timber found in this district are the spruce, hemlock, red and yellow cedar, poplar, alder, willow, birch, and pine.

The spruce timber found in this section generally has a diameter of from 3 to 6 feet, and towers to a height of from 70 to 100 feet, growing straight as an arrow. I did not find any very extensive bodies of this timber, or where it might be considered a vast forest, but splendid specimens are scattered from one end of the district to the other. The spruce, while sometimes containing much resin and gum, is here generally free from these objectionable features. It is a clear grained wood, from which all the barrels used by the salmon salteries for packing their fish are made. It is easy to split, and will compare favorably with the pine in other parts of the country for shingles and kindred uses. A feature of this timber which gives it special value is that it is inodorous, and fruits and breadstuffs can be packed in boxes made from this wood without danger of their becoming tainted with the taste or smell so common to many woods.

The hemlock corresponds with the spruce in size but is thought to be of little use by the natives and whites, as it is tough, difficult to work up, seasoning very slowly, and unless dry makes poor fuel. Its bark may in the future become valuable for tanning purposes, as it is heavy and thick and can be stripped easily.

I found one quite extensive body of red cedar and two very considerable bodies of yellow cedar. The red cedar will, I think, average larger in diameter, but in height they are about the same. Both varieties of timber are similar in character and appearance. The most distinctive feature between them is a slight difference in the shade of the bark, and the needles of the yellow cedar are round while those of the red cedar are flat. Their foliage is very similar in tint and difficult to identify unless closely inspected. Any doubt, however, as to the name for a tree is dispelled when the ax is driven into the yellow cedar, for a most pleasant odor at once becomes noticeable.

By far the best timber found here, if, indeed, its equal exists in any other part of the United States, is the yellow cedar. It is of a yellowish cast, has a beautiful grain, splits straight, and is susceptible of a very high polish. It contains but little moisture, and seasons rapidly without shrinking or warping. It is hard in texture and light in weight, and is preferred by the natives in all this part of Alaska for making paddles, and though the blades are made long and thin they easily withstand the severe strain often put upon them in these turbulent waters.

Of the two considerable bodies of yellow cedar referred to, one extends for a distance of about 7 miles along the coast, and the other for 10 or 12 miles. The trees average from 30 to 50 feet in height, and measure from 12 to 30 inches in diameter, though I found some as large as 6 feet in diameter, and probably 60 or 80 feet high.

At Jackson I saw several very handsome pieces of furniture made from the yellow cedar by the superintendent of the sawmill at that place. There can be no doubt, now that there is an opportunity to acquire title to land for industrial purposes in Alaska, that the merits of the yellow cedar will be made known to the world, and it will become one of the most popular woods in the market for furniture and finishing purposes.

An incident worthy of mention in this connection is that, all through the forests of this section, among the heavy growths of timber can be seen thousands and thousands of yellow and red cedar trunks standing among the spruce and hemlock like white monuments, entirely stripped of their foliage, and undergoing a process of slow decay. In nearly every instance I found by cutting into them that they were in a good state of preservation. I can not account for their condition in any other way than that the heavy foliage of the spruce and hemlock so completely envelopes them that they do not obtain enough sun and air to promote vigor and thrift. I believe if the trees surrounding these varieties of timber could be trimmed out, vast numbers of the yellow and red cedar could be preserved.

Another important feature of these extensive forests is the great number of spruce and hemlock from 6 to 18 inches in diameter, and running up to a height of 80 and 100 feet. The timber line in this portion of Alaska is about 2,000 feet above the sea level.

All through the timber upon the sides of the mountains there is a heavy covering of moss, and one sinks through it to a depth of a foot or more. Bushes in spontaneous growth form a complete network, filling with its tangled masses the interstices between fallen stumps and trees, which are also covered with a thick and slippery coating of moss and dead leaves. A prickly plant called "devil club", a species of cactus, having prongs sometimes 6 and 8 feet long covered with briars, penetrating the flesh like so many needles, grows everywhere among the shrubbery throughout this region.

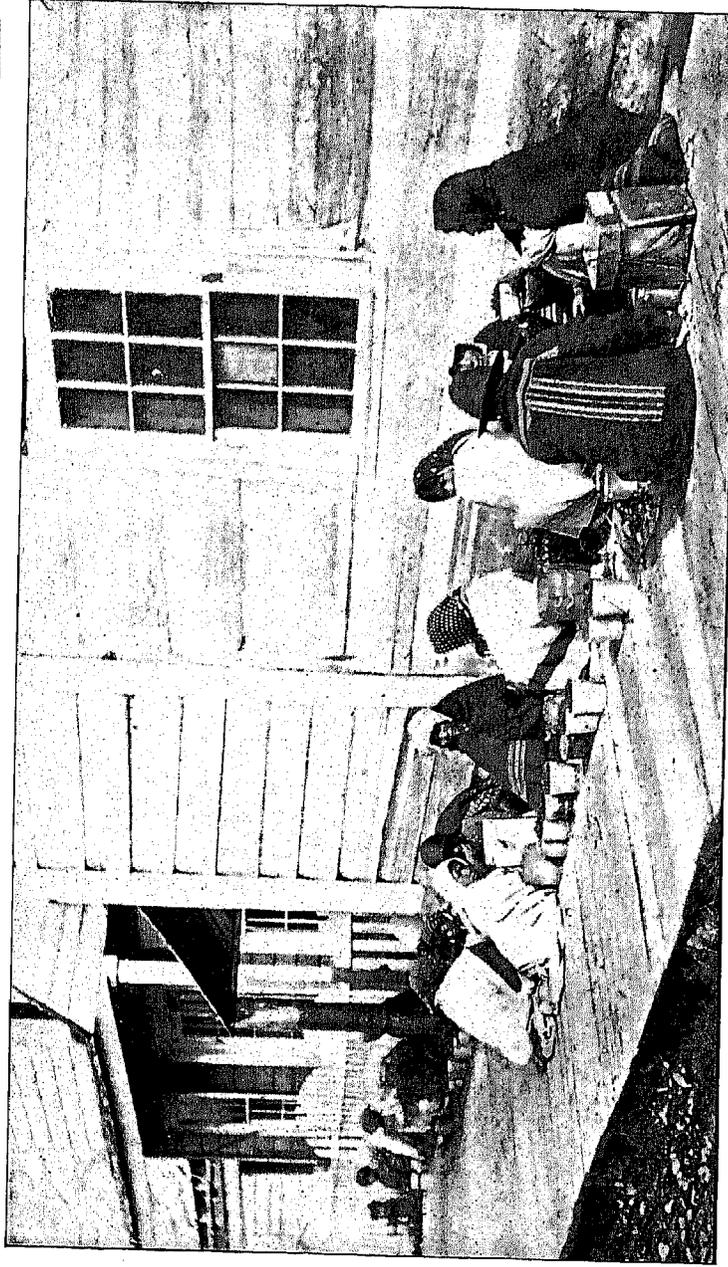
I found, however, that the underbrush is very easily cleared away, for the soil is so shallow and its decayed vegetable component parts so light that it can be uprooted with very little difficulty. The timber on the mountains can be felled with very little labor, slid down the steep slopes into the water, and floated to the mills at much less expense than is often the case in many of our western states, where expensive chutes and roads have to be built.

The willow, birch, poplar, pine, and alder grow in greater or less quantities in this section, but they are very much scattered and of little commercial value.

The surface of the country is generally mountainous, sometimes precipitous, often attaining a height of 2,000 and 3,000 feet, timber prevailing everywhere. Wherever level land occurs, it is covered more or less with a heavy

Eleventh Census of the United States.
Robert P. Porter, Superintendent.

Alaska.



SALMON BERRIES FOR SALE.

growth of forest, underlaid with moss and shrubbery. Level land seldom occurs along the main water courses, but tracts of 2 and 3 miles in extent are often found on the shores of inlets.

There is nothing about the general appearance of this part of the territory that would give rise to the impression prevailing to a large extent that it is a barren and bleak region, where only seals and blubber-eating natives can survive the winters. Indeed, the general appearance of the country throughout the whole of this section would suggest fertility, many wild plants and shrubbery of the varieties found in warm and temperate climates growing here.

VEGETATION.

Several varieties of wild berries are found here, chief among which are the red and blue huckleberry, gooseberry, and salmon berry, and in some localities strawberries abound in large quantities. In many places where there is a depression in the sides or on tops of the mountains, or in low, marshy tracts, cranberries flourish. They are usually small, about the size of a huckleberry, and of a most excellent flavor. They are very tender, and become soft and juicy with the least possible cooking. Various other varieties of berries abound, some of which are eaten only by the natives, as they have an insipid taste not enjoyed by us.

In many localities I found potatoes, carrots, beets, parsnips, radishes, lettuce, and turnips grown by the natives, and at some of the canneries the Chinese laborers had patches of ground cleared off, and their efforts at gardening were generally repaid with good results. The vegetables I have eaten in Alaska fully equal in flavor, size, and quality those found in the states.

From what observations I have been able to make in the matter of the possibilities of this country from an agricultural standpoint, I am led to the conclusion that when a class of people who understand gardening and what kinds of root crops and cereals are best adapted to this climate and soil undertake to demonstrate its capabilities their efforts will be rewarded with good results.

Never have I seen a country where the natural vegetation grew with such spontaneity and made such rapid strides toward maturity as in this section. Both timothy and blue joint and the coarser slough and marsh grasses thrive, and clover has done well in localities where it has been planted. If the high latitude of this country gives it a short season, it must be remembered that there are nearly two months, June and July, when the sun is under the horizon but a very few hours in the 24, and what is lost in one season of the year by the shortness of the days is made up in the other and when it is most needed. If the rank and abundant growth of the natural vegetation in this country is an indication of what it would do with cultivated crops, there can be no question as to favorable results.

LIVE STOCK.

The only live stock found in my district, with the exception of 4 hogs at Loring, was in the town of Fort Wrangell, and upon the only farm in southeastern Alaska, 4 miles north of that place, at the mouth of the Stikine river. At Fort Wrangell the stock consisted of half a dozen milch cows, whose owner supplied the inhabitants with milk. The stock on the farm consisted of a score or so of cows and beef cattle and half a dozen horses. The year 1890 was the second season since the farm was established, and the owner expected to carry his stock through the winter with wild grass he had cut and put into a silo. He was hopeful of good results from his first venture in this direction. The cows at Fort Wrangell depend mostly upon hay and grain shipped from Puget sound for winter feed, but when I saw them in October they were fat and sleek, and had passed through the summer feeding on grass growing upon the island in and about the town.

The hogs at Loring found abundant food from the refuse of the boarding house, and their sleek condition might have been accounted for from the care they received. Swine thrive, however, upon fish and clams found upon the beach, but when fattened in this way a disagreeable flavor is imparted to the meat. If, however, the animals are subsequently penned up and fattened on corn and grain, the fishy taste is destroyed.

WILD FOWL.

Myriads of wild fowl swarm in the waters of this part of Alaska, and many varieties of ducks and sea gulls are found here. A number of different kinds of loon were seen, some of which were of beautiful plumage. Toward the last of the season geese become very plentiful. The sea parrot, resembling a small duck except that its bill is bright red and shaped like that of a parrot, were found all through the district, and they seemed to mingle freely with the ducks. Gray and bald-headed eagles were seen in large numbers, and seemed to inhabit every island. The natives all through this district during the months of July and August like to visit Forrester island, which lies in the Pacific ocean about 20 miles south of Dall island, and a small group of islands about 20 miles farther to the north, called Misty islands, for the purpose of gathering wild fowl eggs. These islands are the hatching grounds for the sea parrots and sea gulls, and from the description given by the natives I should judge that there were myriads of these birds upon the islands. They tell some curious stories about the tameness of the birds and the ease with which they are caught. There are no wild animals of any character upon these islands, and the eggs are deposited upon the bare rocks by the thousand. The eggs resemble those of the turkey

in size, and are of various colors, most of them being speckled or spotted. A native canoe containing 8 men and 3 or 4 women came into our camp one evening with boxes, pails, and kettles filled with eggs. I counted those in one of the boxes and estimated that they had over 1,500. I boiled some and found them of excellent flavor.

DEER.

Among all the different kinds of game which abound in this part of the territory, deer is by far the most numerous. They are found in almost every part of the district. Deer signs were seen at nearly every place we camped, and at no time were we without fresh venison. It seemed to be a matter of little trouble for the natives to shoot them, and it was seldom that one would be gone from camp over an hour without bringing back a splendid specimen. The localities where the natives say they are most numerous are Mary and Kuiu islands. It is to one of these islands that the natives in this district go when on a general deer hunt, and the slaughter at these times is frightful, judging from the number of skins found at the different trading posts and native villages. One trader on Kuiu island told me he shipped 2,500 deer pelts on the 1st of May, the result of but 2 months' trade, and when I was there in the middle of July he had as many more ready for shipment.

FISH.

Foremost among the resources of this section stands its piscatorial wealth. At certain seasons of the year a sight of some of the streams would justify one in saying that there was more fish than water. The different kinds of salmon found here are the king, silver or red, coho, humpback, and dog. Flounders, halibut, and dogfish are also very numerous, and the cod is found in large numbers near the islands bordering upon the Pacific ocean. Crabs and clams abound everywhere, but no oysters are found in this section. An excellent kind of fish found in all the salmon streams and lakes is the salmon trout. It looks like the brook trout found in the mountain streams of many of our northern states. It has crimson and purple spots extending along the sides, and the external resemblance to the mountain trout is so close that even those who are familiar with the latter often insist they are the same, and can not be convinced to the contrary until the fish is cut into, thus displaying the deep red color that is the distinguishing feature of the salmon.

Perhaps the location where the salmon trout are most abundant is in the lake at the head of the stream at Naha bay, the site of the Loring cannery. The superintendent of this establishment told me last August that he believed that there were enough trout in that body of water to supply the country. They grow to about 10 or 12 inches in length, and weigh from 2 to 5 pounds. They have a rich flavor, but their flesh, like most of the salmon, pales when cooked.

Large numbers of porpoise abound in these waters, and can frequently be seen chasing in front of or along the sides of a canoe. The narrow passages often swarm with these graceful animals, whose black backs and sides and white bellies glisten as they dart along. They seem to have little commercial value, and if hunted by the natives it is more for the fun of the sport than for any profit.

It is no uncommon thing to see in these narrow waters enormous black whales frequently coming to the surface to spout. They often go in schools, and in such close proximity to the native canoes as to occasion no little anxiety among the occupants. At times they approach very near, but swim rapidly away when the natives pound upon the sides of their canoe with their paddles.

Many of the natives in the lower part of the territory engage in catching dogfish, which is done by tying a number of large hooks baited with salmon to a line. It is an industry that affords the natives an excellent opportunity to do a profitable business. The dogfish are cut open, and after the entrails are removed they are put into pots, placed over a hot fire, and boiled to pieces. The grease which rises to the surface makes an excellent lubricating oil when refined, and is fast coming into favor. The flesh of this fish, if at all palatable, is never eaten even by the natives, who naturally crave oily food. The bellies of the dogfish are very rough, and when dry are used by the natives instead of sandpaper in rubbing the rust from their guns.

The ulikan, or candle fish, as it is often called, is one of the most remarkable fishes found in these waters. It is about 6 inches long, an inch in diameter, and nearly round. It is very free from bone, and when prepared for the table by boiling furnishes most excellent food. It is one of the most delicate and tender fish found, is so full of oil that it will fry in its own fat, and is everywhere considered a dish of rare delicacy. It is caught in great numbers along the Naas river, just over the southern line of the district. The salting and drying of this fish by the natives of that section has become quite an industry. When dried it resembles the herring in appearance, but is of much higher flavor. The oil from the ulikan is a great delicacy among the Alaskan natives, and when purified is thought to be as palatable as olive oil, while possessed of all the medicinal properties of cod liver oil. It is especially recommended for lung troubles, and is also considered a certain cure for dyspepsia. This delicate fish is found in all the waters of this section, but there does not appear to be the organized effort to secure them here that prevails among the natives of British Columbia.

While fur seals are occasionally found along the shores of the southernmost islands in this district, it is of rare occurrence that they are killed there, but great numbers pass to the seaward of Prince of Wales island on their

Eleventh Census of the United States.
Robert F. Forster, Superintendent.

Alaska.



HUNTING LODGE OF THLINGIT.

way to the rookeries or breeding grounds in Bering sea. I did not see more than 100 fur seal skins throughout my whole district.

Hair seals are found all through this section of the territory in large numbers, and their pursuit forms one of the principal occupations of the natives. They were seen in such numbers and so frequently that they soon ceased to attract my notice.

The natives stretch the skin of the hair seal in the same manner as the beaver skin is prepared for drying, and their market value among the trading posts is from 20 to 70 cents each. About the only use to which the hair seal skin is put by the natives is to cut it up for thongs or ropes used for tying up packages, and for the bottoms of moccasins. It is thick and unwieldy in its raw state, but when nicely tanned it becomes soft and pliable and is sometimes made into caps, which are impervious to the cold. The natives try out the fat of the hair seal, and the oil is a favorite article of food with them.

MINERAL INDICATIONS.

Prince of Wales island is probably one of the richest in natural resources in this section of Alaska. It is nearly 150 miles long and averages 30 or 40 miles in width. All along its shores are innumerable islands, some of them 6 or 8 miles long. Between are estuaries, which as the tides recede leave beautiful beaches, and following the shore, densely covered with the thick foliage of the fir tree, are found inlets sometimes extending a mile or more, with waters deep enough to admit of floating a large vessel. This is one of the peculiarities as well as a beautiful feature of this part of the territory, and one that the casual observer is apt to overlook. The narrow opening of a spacious inlet is often passed by unnoticed when sailing a little way from shore.

The indications on the surface are that Prince of Wales island contains much mineral. Gold, both free milling and in sulphurets, silver, galena, copper, and iron have been found in many places, but as yet no extensive efforts have been made to demonstrate whether any of the ores mentioned exist in paying quantities. If minerals exist in other portions of the district the very limited prospecting done has failed to show it. Annette island may be an exception, and also Dall island. Some of the finest specimens of gold-bearing ore I have seen on my journey were said to have been taken from Dall island.

On the east side of Prince of Wales island, near Karta bay, coal has been found, but the little prospecting done has failed to give promising results. The carbon is of a soft character and said to contain so much sulphur that it is not desirable for use. One prospector told me that he believed that a better quality could be found at a greater depth and in considerable quantity. This man had done much mining in coal in other parts of the country.

On the west side of Prince of Wales island, about 20 miles from Klawak, I found a very curious group of springs. My native paddlers had told me that a branch or leaf dipped into the water would soon be coated over with some substance which hardened upon exposure to the air. I went to the place and found at the mouth of a small stream a number of holes, from which water seemed to be oozing. Further on round mounds 3 or 4 feet high were scattered for a distance of an eighth of a mile or more on both sides of the stream. These mounds were hard, and picking at them with my knife I found the substance would chip off in minute particles, and seemed to have a salty taste. From the tops of these mounds water came welling up from holes 1 or 2 inches in diameter. When I stopped up a hole for a few moments water would shoot into the air several inches. A peculiar feature of these springs was that from the opening at the apex a streak of deep crimson stains extended down the sides of the mounds. The water seemed to be colorless, but a reddish brown sediment was deposited after it had been standing a short time. The taste of the water was disagreeable and tart, and an offensive odor issued from the openings. The effect of taking it into the mouth was similar to that of drinking lime water. I unfortunately broke the bottle which I had filled with the water to be analyzed. On the banks of the stream in the immediate vicinity of the springs were innumerable deer tracks, and I concluded that the water must be palatable to them.

About 4 miles east of Yess bay settlement, on the opposite side of Behm canal, there is a number of hot springs, said to contain valuable medicinal properties. They are much resorted to by natives, and are considered efficacious in venereal diseases.

CLIMATE.

Within the limits of my district from the middle of June until the 1st of August there were but few hours in the 24 that it was not daylight or nearly so. In the last days of June the glow that marked the path of the sun after it had dipped below the northwestern horizon did not fade away until the bright tints which preceded the dawn of another day had appeared in the northeast. It is not until the first days of October that one begins to notice the shortening of the days, but when once the change is apparent it is rapid.

Only upon the tops of the very highest mountains in this part of the country is snow seen later than the 1st of June. The first snow falls about the 1st of October, but usually disappears in a few hours. It sometimes falls to a depth of 3 feet in midwinter. Winter can not be said to set in until about the 1st of December, and by the 1st of May the weather is always of a temperature that admits of traveling, and prospecting may be carried on by that time, except on the highest mountains.